SUSTAINABLE PRACTICES AND SUSTAINABILITY IDEOLOGY ON SMALL FARMS IN NORTH-CENTRAL WEST VIRGINIA

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This dissertation examines farming practices and ideologies through the lens of sustainability rhetoric. While "conventional" and "sustainable" agriculture are often set in opposition in the literature, this research shows how, in West Virginia, small farmers who identify as being in both camps actually use many of the same methods and practices. Consequently, these farming operations are characterized not as contrasts and opposites, but rather as a spectrum with methods varying more by degree than type. In the literature, sustainable farmers are often described as employing practices that prioritize the environment and community, whereas conventional farmers purportedly use practices that maximize profit at a cost to the environment. Such a dichotomy suggests that sustainable farmers utilize methods entirely different from conventional farmers. This study reveals that small farmers of both types use many of the same agricultural practices for similar reasons, and argues for an analytic distinction between "sustainable practices" and "sustainability ideology".

The ideologies and practices involved in agricultural operations in the United States are contentious issues, with differences in opinions and values competing at the levels of household decision-making, market principles, and federal policy. For some, there is increasing concern about the impacts of conventional agriculture, producing alternatives such as organic agriculture and re-localization efforts. Sustainability rhetoric

often depicts the alternatives almost entirely in opposition to conventional agriculture, and stereotypes that are based on large scale, conventional agricultural operations are extended to any conventional farm regardless of size and scale. This study reveals the actual practices and ideologies of small farmers who identify as conventional or sustainable and highlights sustainability ideology in order to help understand why there is not more collaboration among the conventional and sustainable farmers. By demonstrating that conventional small farmers do not always employ the same methods as agribusiness farmers and instead more often resemble sustainable farmers (although at times with a different ideology), this study argues for increased collaboration among rural small farmers of both types, as well as those who work with them.

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DEDICATION

To Rich,

a truly phenomenal adviser.

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1.0 INTRODUCTION

1.1 RESEARCH PROBLEM

While conventional and sustainable agriculture are often set in opposition in the literature, this research shows how, in West Virginia, small farmers who identify as being in both camps actually utilize many of the same methods and practices. This suggests that these farming operations may be best characterized not as contrasts and opposites, but rather as a spectrum with methods varying more by degree than type. Typically, sustainable farmers are described as those who employ practices that prioritize the environment and community whereas conventional farmers purportedly employ practices that maximize profit at a cost to the environment. This dichotomy in the literature often creates the misunderstanding that sustainable farmers utilize methods that are entirely different from conventional farmers. This study reveals that small farmers of both types are using many of the same agricultural practices for many of the same reasons, and argues for the importance of an analytic distinction between "sustainable practices" and "sustainability ideology."

The research is based on twenty-one months researching farmers in north-central West Virginia, employing both participant observation with over eighty farmers, and semi-structured interviews conducted on twenty farms with a total of thirty-two farmers. This study reveals the actual practices and ideologies of small farmers who identify as conventional or sustainable and

highlights sustainability ideology in order to help understand why there is not more collaboration among the conventional and sustainable farmers. By demonstrating that "conventional" small farmers do not always employ the same methods as conventional, agribusiness famers and instead more often utilize the same methods as sustainable farmers although at times with a different ideology, this study argues for increased collaboration among rural small farmers of both types, as well as those who work with them.

Farming practices in the United States are contentious issues with different values and ideologies intersecting and competing at the levels of household decision-making, grassroots movements, market principles and United States federal policy. One of the most prominent of these issues is the increasing disenchantment with the circumstances and impacts of modern, large-scale, conventional agriculture, which has led to the creation of numerous alternative agri-food movements and sparked a renaissance of small farms for at least the past sixty years (Barbieri, et al. 2008, DeLind 2011, Friedland, et al. 2010, Howard and Allen 2010, Wittman and Beckie 2012). Well known alternatives to large-scale, conventional agriculture include organic agriculture, slow food cuisines, and re-localization practices, all of which are often depicted in sustainability discourse in order to convey an opposition between sustainable practices and large-scale, conventional agriculture (DeLind 2011, Goldschmidt 1946, Hewitt 2009, Irwin, et al. 1998, Lyson and Guptill 2004, Mintz 2006, Ostrom 1990, Shuman 1998). The resurgence of small farms and the increased prioritization of sustainability as a part of the social, political, and economic mainstream create complicated and multidimensional circumstances in which sustainable farming is conceived, represented, and ultimately practiced.

This dissertation examines how farmers' concepts of sustainability, which are influenced by values, decision-making processes, and experiences interact with and navigate diverse

environments such as the ecology of the farm, the broader public perception as represented by the media, and United States federal and state policies such as agricultural regulation and ecosystem management. The literature concerning sustainability often portrays sustainable agriculture in juxtaposition with conventional agriculture, which is depicted as destroying the environment through water and air pollution, creating resistant forms of insects and bacteria, and depleting topsoil reserves. It is also criticized as being harmful to humans due to the incorporation of chemical pesticides and fungicides (Altieri 1992, Barlett 1987, Busch and Lacy 1984, Dahlberg 1991, Davis and Langham 1995, DeLind 2011, Earles 2005, Forssell and Lankoski 2015, Lyson 2000, Pilgeram 2011). In contrast, sustainable agriculture is not supposed to cause any harm to humans or the earth and is even touted for its ability to reverse the negative effects of conventional practices and replenish the soil, revive the earth's biodiversity, and enhance food nutrition. In addition, sustainable agriculture aims to not only improve environmental conditions for future generations, but also economic and social conditions as well (WCED 1987).

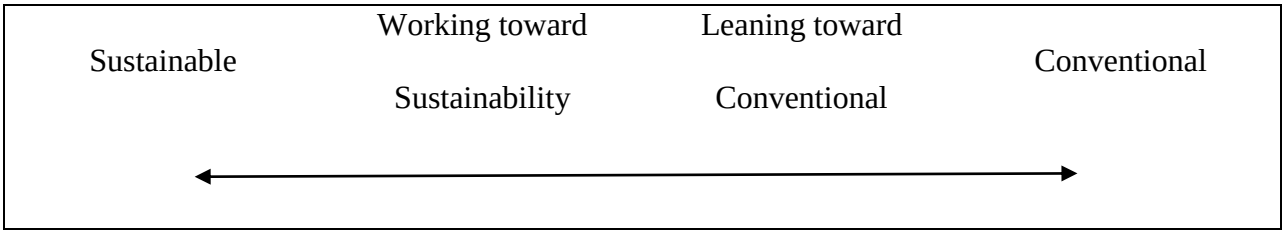
Sustainable agricultural methods are presented in contrast to conventional, industrial agricultural methods and are described as a better alternative. This distinction has created the idea that the two types of farming are completely separate and in opposition to one another and farms can be simply categorized as either sustainable or conventional. However, I have found that this clear-cut labeling of the fixed state of a farm as either exclusively sustainable or conventional has caused much confusion and frustration among rural, small farmers in north central West Virginia.

The incorporation and application of sustainable and conventional labels have produced a false sense of classification and identification and have fueled the idea that sustainability is

something that is concise and straightforward when instead it is actually a multifaceted and extremely complex issue. There are numerous factors involved in considering an entity's sustainability and classifying it as sustainable or unsustainable oversimplifies the myriad of processes involved. For example, determining sustainability is not free from cultural influences and political agendas. Governments and organizations not only adhere to public opinion, but also to their own interests and they wield considerable power when planning sustainability policies for countries, corporations, schools, forests, oceans, and livelihoods (DeLind 2000, Escobar 1988) .

The farmers in my study are often frustrated with the classifications of "sustainable" and "conventional" because they feel the labels do not describe the multidimensionality of their farms. While farmers readily make use of the labels on websites and other social media, they revealed their perceptions about the inadequacies of the terms during our in-depth interviews. Although, they have clearer ideas concerning differences between sustainable and conventional farming methods, many farmers were less clear about what defines sustainability specifically and the more we talked about the issues the more imprecise the definitions became. When farmers did choose a label to describe their farm, multiple clarifications and elaborations were included to the point that very few identified themselves as simply sustainable or conventional. Instead the majority of farmers expressed alignments along a spectrum of farming philosophies such as "working toward sustainability" or "leaning toward conventional." Therefore, the four categories that I use in this dissertation are "sustainable," "working toward sustainability," "leaning toward conventional," and "conventional" as they emerged from conversations with the farmers and I discuss in greater detail in my methodological section and in chapter 4.

Table 1: Spectrum of Farmer Categories



Even though farmers find fault with the limited selection of ways to succinctly describe their farming operations, they do nonetheless identify as gravitating toward one end of the spectrum or the other. Throughout the dissertation, farmers who describe themselves as either "sustainable" or "working toward sustainability" I refer to as sustainability-aligned farmers, while farmers who describe themselves as "leaning toward conventional" or "conventional" I refer to as conventionally-aligned farmers.

My major finding of the research is that regardless of how the farmers choose to identify themselves whether sustainability-aligned or conventionally-aligned, they are employing many of the same sustainable practices and therefore the labels of "sustainable farm" and "conventional farm" often conceal the complexities and nuances of the farmers' values, beliefs, practices, and daily decision-making on the farm. While I was conducting my fieldwork, it became evident that there was very little personal interaction among the differently aligned groups of farmers; they did not associate often and they certainly were not routinely seeking advice or help from one another, regardless of the similarity among practices. Consequently, the term sustainability, which farmers have heavily criticized for inadequately capturing their philosophies, management strategies, and practices, resulted in a means to create fairly strict boundaries. My research shows that despite feelings of frustration toward the term there are various ideas and ways of life embedded within it, which the sustainability-aligned farmers believe in and use to help shape their identities. This contributes to an understanding of my main

research question which is why there is not more collaboration among farmers of different alignments. This is largely due to a sustainability ideology held by many sustainability-aligned farmers and felt by many conventionally-aligned farmers that sustainability is not just specific agricultural methods, but rather consists of an ideological world construct which becomes operationalized through various farming operations.

1.2 OUTLINE OF THE DISSERTATION

This dissertation illustrates how despite using many of the same practices and sharing a similar perception of the farm, sustainability-aligned farmers view conventionally-aligned farmers as farming too differently to produce more beneficial collaboration. The first chapter sets the scene and outlines the thesis. In the second chapter I describe my Appalachian field site in north-central West Virginia and include an account of my methodological approach, research methods, and analysis together with the details of how I organized my research questions, how I developed my sampling frame, and how I conducted participant observation and interviews.

I then discuss the history of West Virginia and the socio-political climate of how it came to be settled in order to provide an understanding of how the land became valued for agricultural and resource extraction uses. After this, I explain in greater detail the agricultural environment of West Virginia in the twentieth and twenty-first centuries so that my project is contextualized spatially and temporally. More specific data regarding the composition of the farm families, management operations, and farm types are provided in this chapter as well. In addition, I present agricultural statistics, such as farm size and market value of products sold, and compare

them with other states so that West Virginian farms are understood within a larger background of The United States' agricultural industry.

The farmers did not always feel that The United States Department of Agriculture's definition of small farms accurately described their farms or the type of "small farms" which existed within West Virginia. Therefore in chapter 2, I also explain some of the ways small farm has been defined and how the definition that I use comes from a combination of government designations and farmers' descriptions. I also introduce one of the main problems I found, which is that farmers often judged other farmers based on their practices and ideologies to the extent that regular and beneficial collaboration did not often exist.

Sustainability is a concept that has been widely used and defined depending on the circumstances by organizations, corporations, and governments. I therefore provide a theoretical deconstruction of the term in chapter 3 in order to demonstrate not only the frustrations of the farmers regarding the inadequacy of it, but also the politically and culturally charged nature of it as well.

I maintain that sustainability is not a clear, concise concept and that there are a vast number of factors that contribute to the sustainability of an object or place. Often, many of the factors are overlooked and sustainability becomes defined by only a few measures. I argue that instead it is much more fruitful to examine sustainability as a concept through sustainability rhetoric. Almost every sector of life and every discipline of academia have their own ways to conceptualize and enact sustainability and in this chapter I examine several different kinds of sustainability rhetoric, each one illustrating the dynamism of the term. The approaches all differ and focus on specific elements of sustainability which often lead to disagreements and divisions

among scholars, policy planners, and development workers as to what is the best means to achieve sustainability.

Within this chapter I also provide an account of the two main food movements in which the small farmers participate: 1) organic agriculture and, 2) re-localization, which are often part of sustainability rhetoric. I offer a historical framework for the origins of organic farming methods as well as a more recent criticism of the co-optation of the organic market by large agribusinesses. I also include an explanation of the emergence of the local foods movement as well as the scholarly critique of the way it has come to operate within society. In my study, all of the farmers rely on, to varying degrees, the local population and infrastructure in order to sell their goods. While some of the farmers view this as a new selling point, others understand the situation more as "business as usual" because their parents' or grandparents' farms were based upon local connections.

Chapter 4 is an account of my major findings. Due to the complex nature of sustainability it was not realistic or even necessary to conclude whether a farm was sustainable or conventional. I therefore use categories that emerged from conversations with the farmers in order to describe their operations and lifestyles. I provide an ethnographic profile of a farm family for each category of "sustainable," "working toward sustainability," "conventional," and "leaning toward conventional" as well as a more detailed explanation of how the categories came to be. I discuss how the majority of the farmers in my study consider the labels impractical and instead possess a complex understanding of "sustainability". I discuss my main research question of why there is not more collaboration among the farmers of different alignments and the consequences of this disconnect.

I also show that in addition to the similarities among farmers of different alignments, different sustainable agricultural organizations which consist of rhetoric designed to represent the two contrasting operations of sustainable and conventional have many fundamentals in common with conventional agriculture. Specifically, I use the sustainable agricultural organizations, Sustainable Agriculture Research and Education (SARE) and the Pennsylvania Association for Sustainable Agriculture (PASA), to illustrate my point because they are the most commonly accessed organizations among the sustainability-aligned farmers. Although these organizations advocate that they stand in opposition to conventional farming operations, they share the same basic foundation of production-oriented goals aimed at producing higher yields and improving crops.

Both organizations claim they have "sustainability" efforts at their core, but they rarely extend their resources toward efforts relating to economic and social sustainability. Instead, the majority of their efforts are consumed by production based methods which are designed to increase harvest numbers and improve crop varieties. This represents a disconnect between sustainability rhetoric and sustainability practices (Allen 2004). I found a similar disconnect among the farmers because the sustainability-aligned farmers believe they are doing something completely different from the conventionally-aligned farmers, when in fact; they are utilizing many of the same sustainably recognized practices.

I then discuss what I discovered to be the reason why there remains a lack of collaboration and even a lack of mutual understanding among the farmers despite the similarities. I argue that although the differently aligned farmers share similar practices and a dissatisfaction with the labels, the commitment to sustainability by sustainability-aligned farmers has manifested itself in a "sustainability ideology" that has been created through sustainability

rhetoric and has also been produced and reproduced by individuals and organizations in order to separate themselves from conventional farming and to establish a specific way of life.

Chapter 5 provides additional and detailed data on the similarity of practices and philosophies among the small farmers. I explain the theoretical influences I use to frame these practices and philosophies, such as multispecies ethnography and Heather Paxson's ecology of production. The conceptualization of the farm as a system of interconnected and interdependent parts is a shared foundational philosophy, regardless of farmers' alignments. This perception guides much of the decision-making regarding daily tasks as well as new and experimental strategies. With this shared philosophy, there is great potential for how farmers could work together and improve the practices that are used to nurture the interdependent nature of farms.

The farmers view the farm as being comprised of numerous different biological life forms (land + animals/organisms + crops). The land is not simply dirt, but rather soil that is home to an almost infinite number of organisms, and farmers regardless of their alignments, take great pains to ensure the health of their soil because they feel that is where their farm begins.

The animals and crops are not merely products to be sold or eaten, but rather they are viewed and used as "management tools", which are integrated into the farm ecology in order to affect the overall health, productivity, and efficiency of the farm. The animals and crops work within a recursive and dialectical relationship which includes the land as well because all of the parts are interrelated and can alter and modify one another.

Within this chapter I describe how multispecies ethnography demonstrates the advantages of abandoning the western binary opposition of nature/culture to provide a more holistic picture of how humans "become with" rather than simply become. I include the works of Clifford Geertz, Anna Tsing, and Donna Haraway as some examples, which illustrate what can be learned

from broadening the anthropological lens to incorporate other species. I found that the practices implemented on the farms often reflected the relationship between the farmers and other living organisms and how that relationship constructed concepts of value. The labor that was required to maintain outcomes based on interdependent and, at times unpredictable, factors was viewed as "a connectedness" which produced meanings of "good food." I conclude this chapter with excerpts from my field notes which capture the connectedness farmers experience while laboring to produce good food.

Chapter 6 focuses on my usage of the phrase, "sustainability ideology." First, I provide a theoretical analysis of ideology as informed by structuralist and poststructuralist scholars in order to establish the nature of ideology as well as its power. Then, using responses from the conversations and interviews that I had with the farmers, I argue that sustainability ideology plays a prominent role in hindering collaboration between differently aligned farmers.

Sustainability ideology has become almost dogmatic in that it provides many farmers with a means to understand and navigate their lives. It not only gives them purpose, but perhaps more importantly it gives them answers. It helps them to understand a range of issues from catastrophic environmental events such as climate change to public health concerns such as *Escherichia coli* (*E. coli*) outbreaks. Problems are conceived, measured, and analyzed from the lens of sustainability ideology and so the answers and solutions are as well. Most of the problems are interpreted as being caused by conventional and industrial methods and for this reason sustainability ideology rhetoric opposes those methods and almost anything that is associated with them. This strict opposition has caused the shared practices and ideas of sustainability-aligned farmers and conventionally-aligned farmers to be overlooked and has

resulted in an unused and unrealized potential for increasing farmers' resources in the form of combined knowledge and experience.

In this chapter, I also discuss how sustainability ideology has often been heavily infused with a biocentric approach, which is a branch of environmentalism that prioritizes elements of the environment such as water, forests, and animals, but criticizes the human emphasized, anthropocentric approach. According to biocentric advocates, the anthropocentric approach has dominated sustainability policies for far too long and they want a shift in the focus to emphasize the needs of other living creatures instead (Guha and Martinez-Alier 1997). I include examples of different projects espousing sustainability efforts, one in Tanzania and one in India, which have been influenced by the biocentric approach to illustrate some of its consequences. I also describe how specific agricultural regulations, built from a sustainability ideology, have become "big government" for most small farmers and how the rulings often run contrary to local knowledge, which has been developed *in situ* to encompass the holistic wisdom of local communities.

I include the examples of the negative effects on people, not to overly criticize sustainability ideology, but rather to illustrate the dangers of exclusive thinking. Many sustainability subscribers do not even want to collaborate with those they feel are "on the other side" and this could be disastrous. The problems that face our world are much too large to attempt to solve with only one epistemology. Similar to the arguments of traditional ecological knowledge (TEK) much can be learned from combining different ways of knowing and understanding the world.

Finally in chapter 7, the conclusion, I offer a glimmer of hope that more collaboration can occur. During my study, I met two farmers, Ian and Rachel[1], who align along the spectrum toward sustainability quite strongly, but who also frequently collaborate with a conventionally-aligned farmer. The farm that Ian and Rachel currently operate is their first farm, but before purchasing their current farm they apprenticed on a small, "sustainable" farm and learned a great deal from the farmers. After moving to their own farm, they began seeking the advice of their conventionally-aligned neighbor, for whom they grew to have a great deal of respect and admiration. Ian and Rachel often refer to him as their mentor and credit him for their ability to overcome many farming challenges as well as for shaping their ideas of sustainability. They feel their ideas have greatly evolved since first starting the farm because they have seen that even though their mentor is a conventionally-aligned farmer, he utilizes many different sustainable approaches and practices on his farm. Ian and Rachel told me that they would have never known this if they had not started talking to him about farming.

In addition to the specific example of farmers of different alignments overcoming the heavily laden labels and being able to collaborate, scholars are also pioneering this field. A professor, Brandi Janssen, at Iowa University is researching the benefits that alternative agriculturalists could acquire by adopting knowledge from conventional agriculturalists in relation to farm safety practices (Janssen 2015). Janssen argues that despite all of the horrific accidents caused by large scale, industrial agricultural equipment such as forage harvesters and feed grinders, some of the equipment is still safer than that belonging to small scale, alternative farmers. She believes that if we look to conventional agricultural equipment, we could make improvements within alternative agricultural equipment and help to prevent more on-farm

[1] The names of the farmers used in this dissertation are not the real names in order to protect their privacy.

injuries. When examined in this light, safety is a part of agricultural sustainability, or perhaps more specifically, farmer sustainability.

These two examples of collaboration are included in the conclusion in order to demonstrate that it can be accomplished. Despite the strong ideological differences between farmers of different alignments it is possible to have more cooperation, respect, and understanding. As this dissertation will show, there are many areas in which the farmers can connect and offer each other advice, guidance, and even opportunities to diversify farming strategies.

2.0 FIELD SETTING

My fieldwork began with preliminary research in the summer of 2011 in the north-central region of West Virginia. Although I communicated with farmers from all over the state, I concentrated on the north-central region because I had established many contacts through farmers' markets associations and West Virginia University's Agricultural Extension network. I received funding from the Small Farm Center to conduct fieldwork beginning in July of 2012 and continuing for the next twenty-one months until March 2014. While conducting fieldwork I dedicated much of the time to participant observation and conversing with dozens of farmers in order to learn about the specific farming environment of the region. During the last several months I conducted more formalized, semi-structured interviews with thirty-two farmers. Throughout the entire project I also worked with several professors and extension agents within the University of West Virginia's Department of Agriculture.

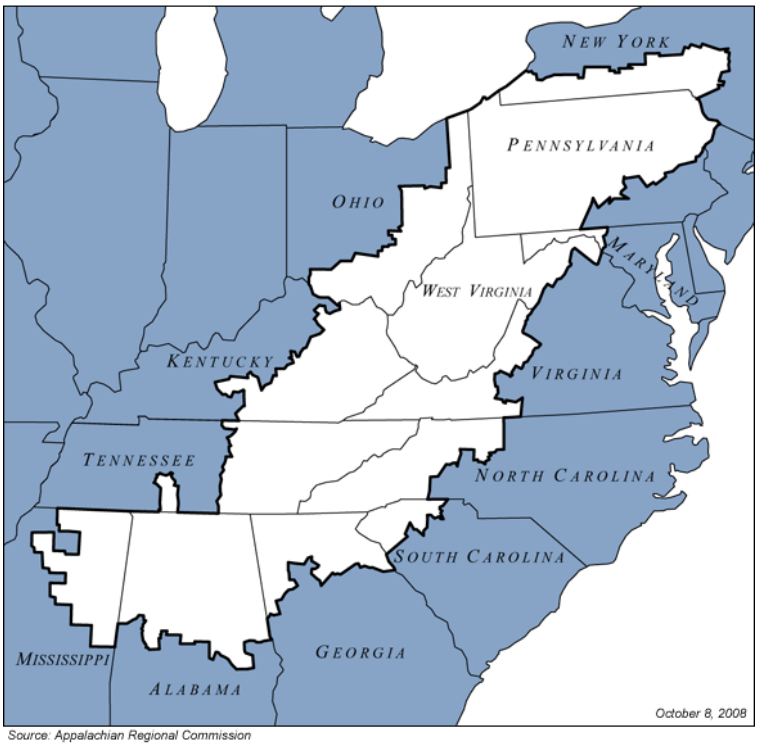


Figure 1. Location of Appalachia. Photo Credit: Wikimedia Commons.[2]

Figure 2. Location of West Virginia (left) and Location of North-Central Region (right). Photo Credit: Wikimedia Commons, with edits made by Amanda Zickefoose.

[2] This is the boundary of Appalachia according to the Appalachian Regional Commission (ARC). I chose this depiction because it is often used, however as I explain in the following sections the boundaries and definitions of Appalachia are extremely complex.

2.1 METHODOLOGY FOR THE STUDY IN NORTH-CENTRAL WEST VIRGINIA

My fieldwork and data analysis were qualitative and quantitative in nature and derived the most from conversations and interviews that I had with individual farmers. In the beginning of this research project I was most interested in deconstructing "sustainability" in order to learn how farmers defined and conceptualized it. I began by compiling a list of farmers which was generated from two sources: 1) an agricultural extension agent who has been working in West Virginia for over thirty years, and 2) farmers' market membership directories. I had numerous meetings and conversations with the extension agent and received names of farmers, additional extension agents, academics, and professors who could help with the project. This same agent personally introduced me to several of these individuals. I also talked with other extension agents and academics and asked for additional sources to help compensate against any potential biases and made a list of these farmers.

The membership directories of farmers' markets provided me with a second list of farmers working all over West Virginia. I compared the two lists and looked for overlap between the names and then from this I generated a master list that served as my sampling frame. In addition, I also checked the list for farmers who espoused "sustainable" practices and those who did not so that I would not stack my participants toward those who only advocated for sustainability.

The master list contained fifty-one different farmers whom I contacted by either phone or email to determine interest in the study and after a few meetings and farm visits, thirty-two farmers were eager to participate in the project. It soon became apparent that husbands, wives and partners did not always agree on farming philosophy or practices and so interviewing each of

them when possible demonstrated the complexity of decision-making on the farm and explains why there are twenty farms in my study with a total of thirty-two farmers.

Originally I developed the master list to include an even distribution of "conventional" and "sustainable" farmers based on the descriptions from extension agents, farm websites, and professors. However, once I began talking with and interviewing the farmers it became clear that the farmers did not fit nicely into distinct categories and instead they revealed to me that they were frustrated with the term "sustainability" and offered me their own descriptions of their farms. I reorganized the list after several months of fieldwork to more accurately reflect the operational systems of conventional and sustainable as a spectrum heavily relying on how the farmer identified. The categories that resulted were:

- "Sustainable",
- "Working toward Sustainable",
- "Conventional", and
- "Leaning toward Conventional"

The farmers themselves explained their own category to me. When I would ask if a particular farmer was sustainable, I was often corrected with a frown and sometimes a bit of a chuckle and the farmer would tell me it was something they were "working toward" or "trying to achieve" and that it was "a process". A similar situation resulted with the "conventional" farmers except instead of saying conventional farming is something they were trying to achieve, they said things like, "Yes, we're more like conventional farmers, but we utilize many of the same practices as those sustainability farmers." Only occasionally would farmers say they considered themselves or their farms to be one absolute (sustainable) or the other (conventional).

If, after asking farmers to describe their farms they said something like, "We're not totally conventional," then I would use one of the responses I had heard several times before and

ask if they felt "leaning toward conventional" described them or something more along the lines of "sustainable." Therefore, the four categories that I use to describe the farmers resulted from numerous informal conversations and the farmers were comfortable identifying with one of the four. Although husbands, wives, and partners did not always agree on everything concerning decision-making on the farm, they did agree on their identifying category.

The breakdown of these categories represents the farm as a unit rather than each individual farmer and comprises my sample as follows: 13 percent of the farms described as "sustainable", 40 percent as "working toward sustainability", 13 percent as "learning toward conventional", and 34 percent as "conventional". Rather than refer to each category individually, I refer to the "sustainable" and "working toward sustainability" farmers as sustainability-aligned farmers and the "leaning toward conventional" and "conventional" farmers as conventionally-aligned farmers throughout the dissertation. Re-examining the percentages with these groupings results in 53 percent of the farmers are sustainability-aligned and 47 percent are conventionally-aligned.

I also had representations of both male and female farmers with 68 percent male and 32 percent female overall. In the most recent agricultural census, the USDA reported 86 percent of all farm operators are men, while 14 percent are women (USDA 2012). However, when I separated the farmers in my study by sustainability-alignments and conventionally-alignments the gap wasn't as wide among sustainability-aligned farmers. I found that 59 percent were male farmers and 41 percent were female farmers, compared to conventionally-aligned farmers of 73 percent male and 27 percent female.

My age distribution among the farmers was from 18 years old to 84 years old. I used seven categories of age ranges, which were based upon farmers' descriptions such as, "I am in

my thirties" or "My husband and I are in our sixties." This resulted in the categories of 18-29, 30-39, 40-49, 50-59, 60-69, 70-79, and 80+. I plotted each farmer's age range and compared the sustainability-aligned farmers' ages with the conventionally-aligned farmers' ages in a line graph. The chart below illustrates that the conventionally-aligned farmers are a little older, but the difference is not great.

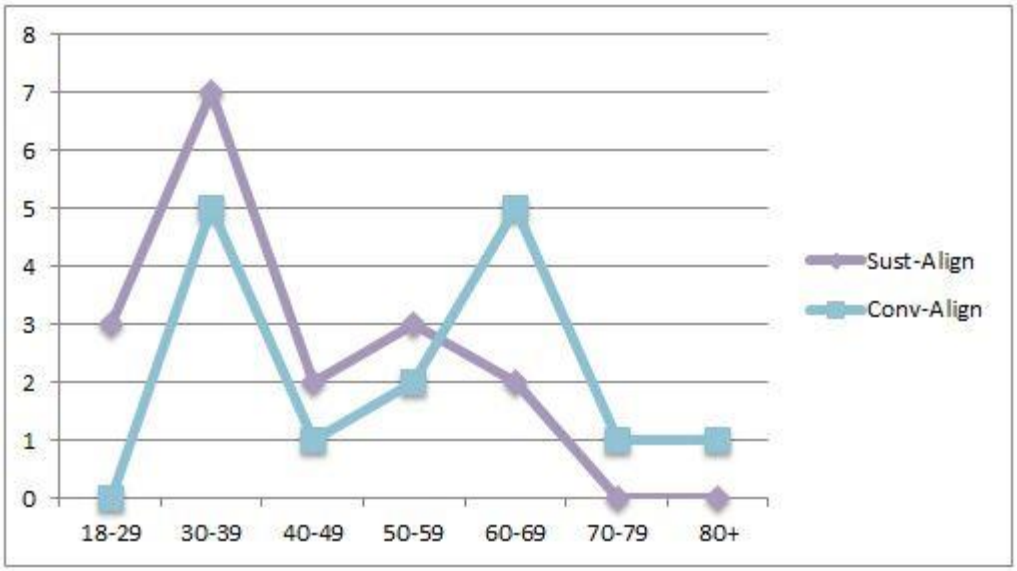


Figure 3: Age ranges of the farmers.

College attendance was higher among the sustainability-aligned farmers than among the conventionally-aligned farmers. However, I did not observe or hear much of anything that made me believe that gender, age, or education played a significant role in hindering more collaboration among the differently-aligned farmers, rather the sustainability ideology was the driving force in their lack of meaningful collaboration.

I concentrated the bulk of my research in the north-central region of West Virginia consisting of Preston, Monongalia, Tucker, and Taylor Counties as well as Garrett County, Maryland because these are the counties where the farmers who agreed to be research

participants resided. Garrett County had become important because of the enforced regulations targeting farmers living within Maryland's Chesapeake Bay Watershed, which concerned many West Virginia farmers because they feared that their state may soon adopt similar regulations. In addition, many of the farmers in Preston County preferred to utilize agricultural resources such as Extension Agents, supplies, and equipment in Garrett County rather than Preston County.

I lived in a rural community in Preston County which was not only a central location to many of the farms that I regularly visited, but was also only a relatively short drive to West Virginia University. This site afforded me many opportunities to visit with the farmers, better understand their way of life, and access resources within the University including professors, extension agents, and the library. A professor within West Virginia University's Agricultural Department was able to get me special permission to access the library's books, journals, and newspapers as well as online resources.

The first year of my research I spent doing participant observation and I visited different farms, talked with numerous farmers, attended agricultural gatherings, meetings and conferences, and researched the area through conversations with the local population as well as library resources such as articles, books, and newspapers. It was during this time that I gathered information concerning the regional social, economic, and ecological issues as well as the intricacies of different farming systems and operations. The farm visits afforded me the most insightful information to understand the specifics of daily farm life, tasks, challenges, trials, tribulations, innovations, and failures because I got to see many of them first hand. From all this knowledge and information, I then created a semi-structured interview guide. Without this detailed experience and intensive learning opportunity, the interview guide would have lacked fundamental topics and questions that were specific to the region.

After re-writing several drafts of the guide I took the next month to conduct pilot interviews to test the organization, accuracy, and content of the interview guide. Following several revisions made to the guide, I developed a finalized version and used it to conduct the semi-structured interviews. However, the questions only served as a guide to make sure that I covered each topic with all of the farmers. The interview flowed much more like a conversation and if certain questions made farmers think of additional information, I did not adhere strictly to the interview guide, which helped to build additional rapport during the interviews (Bernard 2011, DeWalt and DeWalt 2011).

Each interview was conducted with the interview guide and was also recorded using a digital audio recorder. Every farmer that was interviewed with the recorder gave their full consent and the interviews took between three and four hours. I uploaded the audio files to my computer and an external hard drive and then I transcribed the interviews into word documents using the dictation software DragonSpeak. Using the skills I have learned from formal anthropological training during my undergraduate and graduate work totaling nine years, I have analyzed the data by listening to the audio files as well as reading and re-reading the word files multiple times. I have also utilized the data analysis software, NVivo to aid with organizational formats such as identifying themes, correlations, and variances.

2.2 A BRIEF PROFILE OF WEST VIRGINIA

West Virginia is the only state to be entirely encompassed by the Appalachian Mountains and the steepness and ruggedness of these remarkable mountains have fashioned the land into the state's characteristic hollows. West Virginia borders with Pennsylvania, Maryland, Virginia, Ohio, and

Kentucky. The mean elevation in West Virginia is 1,500 feet making it the highest of the states that are east of the Mississippi River, however the elevations vary from only 247 feet in Harpers Ferry to 4,860 feet at Spruce Knob. The Allegheny Plateau and the Valley and Ridge Province are two major physiographic regions of the eastern United States and are a part of the Appalachian Highlands which extends into West Virginia The Valley and Ridge Province contains the Blue Ridge and the popularized Shenandoah Valley made famous by the song "West Virginia, Almost Heaven" by John Denver. Many rivers, such as the Potomac, the Kanawha, the Monongahela, and the Ohio flow through West Virginia and help to give it its odd shape with two panhandles. The Monongahela and the Cheat River boast an unusual feature in that they flow south to north (Rice and Brown 1993).

The state, often described as the second most rural state in the nation, encompasses 24,230 square miles and has a population of 1,816,856. The mean age of its residents, forty-two years old also makes it the second oldest state in the US. West Virginia experiences a natural decline in its population each year as deaths outnumber births which make migration-flows the most significant driver in population changes. Most of West Virginia's inhabitants work for the health care and social assistance sector, although the manufacturing sector accounts for $25.1 billion, the highest output of sales (USCB 2007).

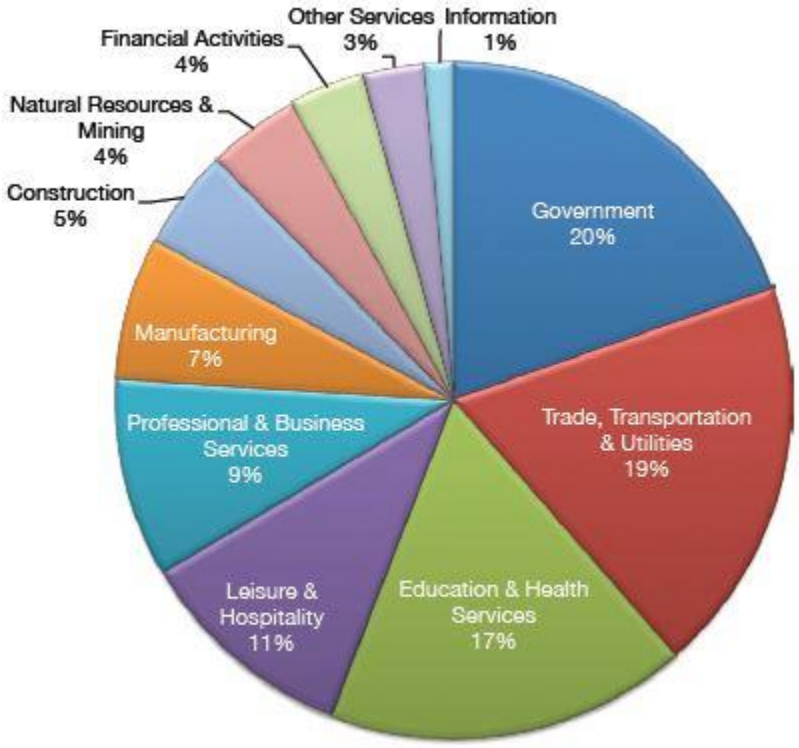


Figure 4: West Virginia Employment Distribution by Sector.[3]

2.3 THE HISTORY OF WEST VIRGINIA SETTLEMENT

Native Americans inhabited the area of contemporary West Virginia at least as long ago as ten thousand years. The most well-known culture group was the Adena, otherwise known as the mound builders, who occupied the area from about 1000 B.C.E. to C.E. 200. The Grave Creek Mound, located in Moundsville, is the largest conical mound in the United States. It was originally nearly seventy feet tall, but today it stands at sixty-two feet tall and two hundred and forty feet in diameter. Almost all of the conical mounds were used for ceremonial burials for

[3] Source: West Virginia Economic Outlook 2016.

individuals who held positions of power. The Charleston Group, a name given to a cluster of mounds found below the city of Charleston, span a distance of five or six miles and share the area with other enclosure earthworks, storage pits, stone graves, and stone mounds or cairns. A mound, found in the same general area as the Charleston Group, contained an interesting burial of two large skeletons. Archaeologists uncovered the skeletons in a sitting position, facing each other with their legs locked together; their hands were extended toward one another and they held a hollow sandstone object, which contained ashes and burned bones (Shetrone 2004).

Figure 5. Grave Creek Mound in Moundsville, West Virginia. Photo Credit: West Virginia Department of Culture and History.

Colonial expansion did not reach farther than the Piedmont region in Virginia (west of the Blue Ridge Mountains) for at least the first one hundred years after settlement in Jamestown. Political and economic ties with England, strenuous daily lives, and skirmishes with Native Americans kept the settlers from venturing too far west. However, later in the seventeenth century, increased demand in the fur trade as well as unbridled curiosity began to weigh heavily

on some of the colonists and incited the beginnings of westward expansion. Sir William Berkeley, Abraham Wood, and William Byrd led the fur trade and initial explorations and the continued interest in fur spurred the expeditions that later pointed toward western Virginia. After King Charles II refused Berkeley's proposed westward journey, Berkeley commissioned a young German, John Lederer to assume the expedition, and in 1670 Lederer was the first recorded white person to gaze upon the Shenandoah Valley. Settlements began in what is now West Virginia as early as 1717 in a town referred to in the record as "Potomoke" which is now believed to be at or near Shepherdstown, WV in the Eastern Panhandle (Rice and Brown 1993).

Figure 6. Appalachian Mountain Range. Photo Credit: Amanda Zickefoose.

It was difficult to encourage significant westward expansion because families were not inclined to settle west of the Blue Ridge Mountains without large numbers of people to help with the challenges of daily life in a region not yet colonized. So in 1730, the leaders of Virginia changed the land laws to encourage migrations into the then Valley of Virginia[4]. The new laws gave land speculators one thousand acres of land for each family that the speculators settled west of the Blue Ridge.[5] One of the stipulations was that the families had to come from outside of Virginia and for this reason; the speculators recruited most of their families from Pennsylvania, New Jersey, and distressed areas of Europe. The new land laws were a critical part in colonizing the western lands and by 1750 roughly eight thousand people lived in the Eastern Panhandle of West Virginia.

[4] This is known today as the Shenandoah Valley which is part of the larger Appalachian Valley.

[5] The arrangements that were made with land speculators also helped to explain the tremendous volume of absentee land ownership in West Virginia.

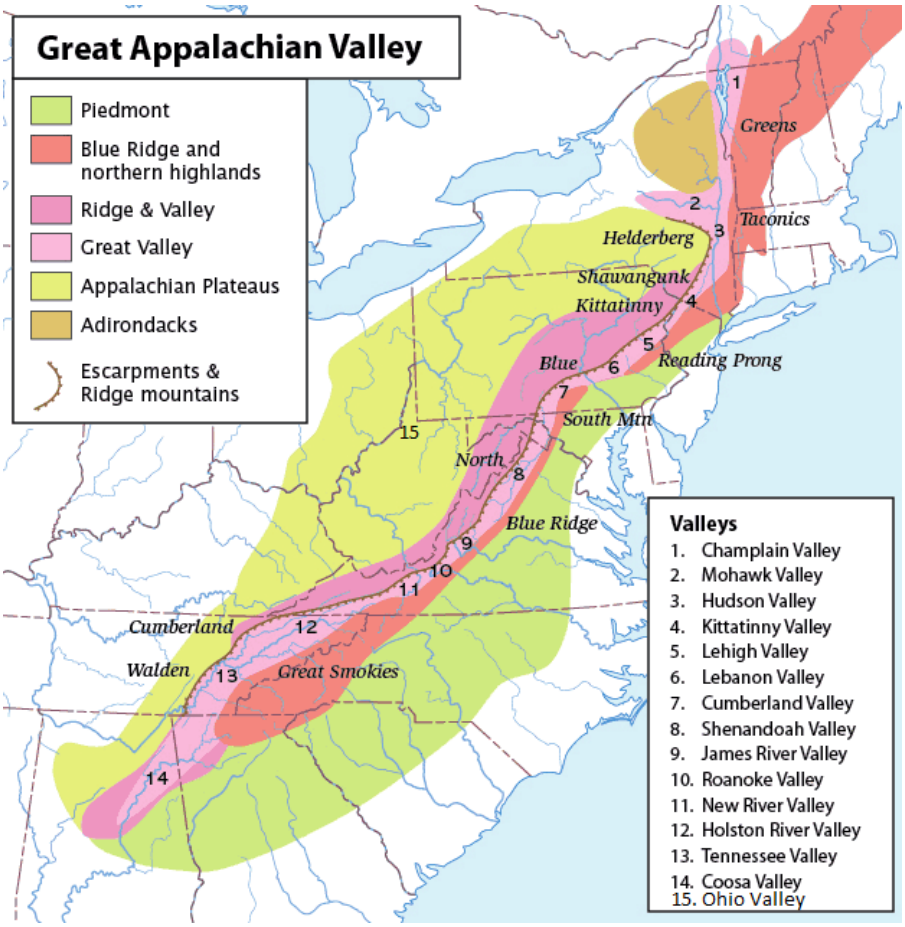


Figure 7. Map of Appalachian Valley. Photo Credit: Wikimedia Commons, with edits made by Amanda Zickefoose.

Further expansion westward came to an abrupt halt due to the intense hostility the settlers faced when they reached the land surrounding the Ohio Valley as it was inhabited mostly by the French and their Native American allies. Those families that did venture farther were either killed by Native Americans or pushed back toward the east. The colonists did not gain a foothold on the West Virginia frontier west of the Allegheny Mountains until after the battle of Fort Duquesne against the French in 1758 and even then it proved to be temporary. Attacks from the Shawnee began soon after Fort Duquesne was taken and remained with such intensity that the British Government formally forbade settlement west of the Allegheny Mountains in 1763.

This caused much dissatisfaction among the settlers for there were still many who wanted to risk the perils, colonize the frontier, and claim the fertile land. However, in 1768 two major Native American tribes, the Cherokee and the Iroquois relinquished their claims to the land between the Ohio River and the Allegheny Mountains, which produced a rapid increase in colonial settlement. There were still skirmishes with the Shawnee until a major battle between the Shawnee and two armies led by the governor of Virginia took place in present day Point Pleasant, West Virginia[6]. The colonists' victory then allowed for increased western settlement (WVDCH 2014).

2.4 STEREOTYPES OF THE REGION

My field setting of north-central West Virginia is located within the larger region of Appalachia and there are numerous misunderstandings and stereotypes concerning the area and the people who reside there. Appalachian is often misperceived as a homogeneous whole inhabited by poor, egalitarian, isolated, backward yet, self-sufficient hillbillies (Billings 1999, Eller 2008, Frost 1899, Harney 1995 [1873], Ledford 1999, McKinney 2002, Still 1991, Weller 1965). The many ways Appalachia has been described, characterized, and portrayed contribute to this image of poverty and degeneracy; however this negative portrayal masks the considerable diversity present within the region. Perhaps because of this "hidden" diversity the area has been described by using a wide variety of criteria, resulting in some uncertainty about to what exactly

[6] The town serves as the site for the legend of the "Mothman" who is said to be the spirit of an executed Shawnee chief.

"Appalachia" refers. In this section I examine several components of Appalachia and Appalachian lifeways in order to demonstrate the incorrect assumptions that have been made about the region and its people in order to reveal a more accurate account of the details. Understanding the stereotypes helped me a great deal during my fieldwork because I heard people referring to them and using them to explain certain farming styles which contributed to erroneous conclusions.

Upon closer examination of the various perceptions of Appalachia it has been revealed that they have been greatly exaggerated and stretched to cover an entire region, and many of the observations concerning society and livelihood strategies gathered in particular counties such as those in Kentucky or Virginia have been generalized to depict the lives of people living within the entire region. The authors and scholars of more recent literature have shown these observations and perceptions to be misleading and even completely false in many cases (Andreescu and Shutt 2009, Arcury and Porter 1985, Batteau 1990, Billings and Blee 2000, Blee and Billings 1996, Drake 2001a, Eller 1982, Eller 2008, Holmes 1980, Lewis 2002, van Willigen and van Willigen 2006, Waller 1988). The ideas of isolation, egalitarianism, and subsistence farming are dismantled by numerous examples of class based societies, participation in local and regional markets, and surplus crops and livestock sold and bartered to neighbors and larger networks (Billings and Blee 1995, Inscoe 1996, Lewis 2002, MacMaster 1991, Mann 1995, Moore 1991, Pudup 1995).

Several authors and scholars devised theories concerning Appalachia's high poverty levels which were based upon inaccurate descriptions of helplessness and victim identities which resulted in over generalized counter-arguments of Appalachia not being any different from other rural places within the United States (Batteau 1990, Brubaker 2000, Caudill 1963, Cooper, et al.

2010, Harrington 1981 [1962], Lewis 2002, O'Brien 2001). Some scholars conducted thorough and insightful research regarding the question of persistent poverty and concluded that it is more beneficial to examine social relations and structural forces rather than individual traits in order to understand the situation (Billings and Blee 2000).

Mountain religions were also misunderstood and therefore their congregations were categorized as being comprised of private and antisocial individuals, mostly due to the fact that they were nondenominational. (Dorgan 1999, Gillespie 1982, Jones 1999, Kerr 1978, Leonard 1999, McCauley 1995, Sovine 1983). Missionary work and settlement schools often operated with the idea that Appalachians were backward and primitive and needed to be taught how to live a more modern and sophisticated lifestyle which often only added to the idea of helplessness (Campbell and Sharp 2008 [1917], Whisnant 2009).

Local color is a specific literary mode that flourished in the nineteenth century, which captured the nostalgia for rural living and simpler times often writing not of the way things actually were, but rather of an imagined way of how things used to be (Campbell 2010, Shapiro 1978, Wilson and Ferris 1989). Language can illuminate the ways in which individuals or groups perceive or represent reality as well as provide insights into broader social and cultural issues and with the move to urbanization and modernization during the 1800s, local color literature often depicted the "rural and simple lives" of Appalachians as uneducated, uncouth, and degenerate (Ahearn 2012, Bauman 2010, Duranti 2009, Hauk 2010, Irvine and Gal 2000, Jones 2002, Longstreet 1998 [1850], Milroy 2001a, Milroy 2001b, Silverstein 2003).

Stereotypes of Appalachians as uneducated and helpless also influenced geographic boundaries of the region as well. For example, in the early 1900s the Russell Sage Foundation, which is one of The United States' oldest foundations dedicated to improving the social and

living conditions in the country, commissioned individuals to explore and map the Appalachian region as well as look for ways to make improvements upon the lives of the people living there (Campbell 1921, Kephart 1913, Whisnant 2009). The War on Poverty resulted in the federal government establishing the Appalachian Regional Commission (ARC), which constructed new boundaries for Appalachia consisting of factors that were idiosyncratic and dependent upon economic government programs during the 1960s (Bradshaw 1992, Couto 2002, Eller 2008, Mazzuca 2010). The ARC's designation for Appalachia represents the most expansive boundary set thus far and encompasses 406 counties in thirteen states which consists of southern New York to northeast Mississippi and includes parts of Ohio, Pennsylvania, New York, Maryland, Virginia, Kentucky, Tennessee, North Carolina, South Carolina, Alabama, Georgia, Mississippi, and all of West Virginia (ARC 2008).

Race has often been misunderstood in Appalachia and there has been a perceived racial and ethnic homogeneity in the region consisting primarily of pure Anglo-Saxon blood. The African American population has been referred to as the "invisible race", but there were many African Americans residing in the region, predominantly as slaves before the Civil War, then near the end of the eighteenth century as freed men and women with a population exceeding 274,000 (Blee and Billings 2001, Cabbell 1985, Drake 2001b, Fox Jr. 1903, Inscoe 2002).

Access to natural resources has long been an issue in Appalachia even before the extraction of coal. Land, either in the form of owning or renting was crucial for survival and access to it began as soon as the settlers entered the region. The first frontiersmen who pushed into Appalachia from Pennsylvania and Virginia had to find land that was not already occupied by Native Americans, while this was not overly challenging during the early part of settlement it

became increasingly difficult as settler populations grew (Dunaway 1995, Hall 1991, Jackson 2006, Ledford 1999, Straw 2006).

The exaction of timber and coal introduces new forms of political, social and environmental issues and often receives extensive criticism for any detrimental effects to the region's people and land (Bailey 2009, Baller and Pantilat 2007, Dublin 1998, House 2008, Montrie 2000, Rouse and Greer-Pitt 2006, Scott, et al. 2005, Shannon 2006, Shifflett 1991). While the coal companies do have a great deal of power, Appalachians are not powerless to institute resistance and enact change. There are numerous examples of people organizing independently as well as within organizations such as the United Mine Workers of America (UMWA), the Appalachian Mountain Advocates, and the West Virginia Highlands Conservancy (Bailey 2009).

Throughout history images and perceptions have been formed concerning where exactly Appalachia is and what exactly Appalachia is. Much of the writing, nonacademic and academic, before the 1970s subscribed to ideas that Appalachia was a region of poverty because those living there could not take care of themselves or could not modernize because of their specific ways of living. Notions abound concerning Appalachia as a homogenous, isolated, backward region full of self-sufficient, yet simple farmers. Originating at least as early as the 1700s, these ideas were still popular in the 1960s and some of them are still popular today. In chapter 6, I provide more detail in how these stereotypes integrate specifically with my findings concerning the lack of frequent collaboration among farmers of different alignments.

2.5 WEST VIRGINIA FARMS TODAY

The majority of farmers in West Virginia generate most of their income off the farm by the principal operator, spouse, or partner working at a second job (USDA 2012). This is not a new phenomenon, but rather has been occurring for many years. I found the same occurrence within my sample of farmers. Many of the farmers or their spouses have an off farm job in order to supplement the income from the farm operations and some of them explained to me that the *only* reason one of them works is so that the family has health insurance. If it was not for providing health insurance many of the spouses would rather be working on the farm full time, rather than their current position which is usually in an office.

Several farmers explained that they would not need the off farm income once they calculated how much more productive the farm would be with the help from the spouse as well as not having the travel expenses to and from the office. However, even with those considerations the costs of acquiring independent health insurance were too great. They therefore continue to work on the farm in addition to a second job because some need the money to combine with the farm income and others need the health insurance coverage. Most of them expressed to me that they would be happier if they were able to stay and work on the farm full time. Regardless of which partner works the off farm job, both view each other as contributing to the farm life in general, connecting the production on the farm and in the home. During their fieldwork in Georgia, Peggy Barlett and Katherine Conger found the same feelings among farming spouses who supported an agrarian ideology (Barlett and Conger 2004).

In my sample, most of the farmers are a husband and wife team and some of them are comprised of two and sometimes three generations; even the young children can be quite helpful on the farm and in the home. Several of the farm families practice homeschooling with their

children and use the farm as a forum to teach their children educational tenets as well as common sense and real life experiences. There are a few farms where the women are the principal farm operators, but more often the men run the farms and the spouses either carry the health insurance policies for the families provided by their off farm employment or manage the household. Many of the families would like to see their children or their grandchildren take the farm over one day, but none expressed a desire to pressure their children into farming. Getting the farms to a stable or "sustainable" place so that the children or grandchildren can take it over is often a goal for many of the farmers and often comes up during conversations of sustainability[7].

Most farms in West Virginia are tucked into hills and hollows or on top of mountain plateaus with the exception of the Eastern Panhandle's remarkable lowlands of the Shenandoah Valley. The state boasts many different types of farming operations including cow/calf operations, vegetables, grains, fruit, poultry, rabbits, sheep, goats, and hogs. The farmers that I worked with grew vegetables and grains and raised cattle, calves, hogs, sheep, goats, guineas (a chicken like bird), donkeys, turkeys, rabbits, and chickens.

The majority of farms in West Virginia are small farms encompassing less than two hundred acres and averaging $37,544 in agricultural products sold per farm (USDA 2012). The United States Department of Agriculture (USDA) defines small farms specifically in terms of sales; small farms are operations which sell less than $250,000 in agricultural products annually (eXtension 2016). Small farms may seem like an idyllic image of the past, but they continue to grace the U.S landscape and in fact account for 91 percent of all U.S. farms and more than half of the land in farms. There are fourteen states where at least 95 percent of all farms are small

[7] This is often expressed in terms of financial sustainability.

farms. In fact, West Virginia has the highest percentage of small farms, not just within Appalachia but the entire United States as well (USDA 2007b).

Income is a difficult subject to discuss within my culture area and therefore I felt I could not obtain the information necessary to define small farms as the USDA[8] defines them. I did not straightforwardly ask any of the farmers how much money their farms grossed. Information concerning income arose from discussions about on farm and off farm work. For example, farmers would tell me that they do make enough money from the farm to support their family or that they do not make enough money to support their family, or varying degrees of these sentiments. In an attempt to define "small farm" for my study, I related to farmers how the USDA defines small farms and asked them if they felt this described their farms or not and after a bit of a laugh, they all defined their farms as small farms in this way.

However, they most often defined their farms in terms of acreage and productivity level and explained that compared to "the large farms out west" their farms were considered small farms. When I asked about the acreage of farms, I was often given rough estimates such as, "Not more than five hundred acres" or "About one hundred acres" or even in many cases, "We have one hundred and fifty acres, but we plant less than ten acres and work less than forty acres of the land. Out west, those farms have eight hundred acres and they have seven hundred and ninety planted with corn." I received similar rough estimates when asking about productivity such as "The large farms out west fill several twenty-ton tractor trailer trucks with their products and we are not even close to that. We are like one two-ton truck or less."

The tables below illustrate some of the differences that the small farmers were referring to when comparing their farms to "the large farms out west". The first table compares West

[8] Appendix B beginning on page 289 contains a list of the acronyms used in this dissertation.

Virginia farms with Iowa farms and the columns which I've highlighted demonstrate the differences in productivity levels among the farms. With the exception of broiler chicken production[9] and wheat production, Iowa's average production per farm greatly outnumbers that of West Virginia, which helps to illustrate the farmers' sentiments for comparison. The second table includes West Virginia, Iowa and Kansas and reveals the differences between acreage and market value of agricultural products sold among the three states.

Table 2: Examples of Agricultural Products for West Virginia and Iowa[10]

Product	WV Number of Farms	WV Number of Product/Acres Sold	WV Average Product Sold Per Farm[11]	IA Number of Farms	IA Number of Product/Acres Sold	IA Average Product Sold Per Farm
Cattle	10,032	250,073	25	24,573	3,446,109	140
Hogs and Pigs	624	8,712	14	6,616	49,355,848	7,460
Broiler Chickens	273	93,749,081	343,403	704	10,572,270	15,017
Corn for Grain	702	35,268	5	47,447	13,709,408	289
Wheat	97	4,200	43	339	13,518	40
Potatoes	342	335	1	373	1,028	3

[9] I discuss this topic more later on within this chapter.

[10] Source: U.S. Department of Agriculture 2012 Census of Agriculture.

[11] Averages for West Virginia and Iowa rounded to the nearest integer.

Table 3: Agricultural Statistics for West Virginia, Iowa, and Kansas[12]

	West Virginia	Iowa	Kansas
Number of farms with less than 500 acres	20,233	68,814	42,256
Number of farms with more than 500 acres	1,256	19,823	19,517
Average size of all farms in acres	168	345	747
Total number of farms	21,489	88,637	61,773
Annual market value of ag products sold (x $1000)	806,775	30,821,532	18,460,564
Average annual market value of ag products sold per farm (in dollars)	37,544	347,728	298,845

These statistics are quite revealing of the farming environment in West Virginia and compliment the farmers' qualitative definitions of small farms in order to provide a clearer representation of small farms in West Virginia. Therefore, to define small farm I use a combined description from the USDA and the farmers themselves. In my study, a small farm:

- is less than 500 acres,
- has members of the family as the main operators,
- has gross sales of less than $250,000 (average farm receives $37,544, while the majority of farms receive less than $2,500, regardless of size)

Even though the number of farms in West Virginia has been increasing since 2002, the average amount of money each farm produces per census year is much lower than in other states

[12] Source: U.S. Department of Agriculture 2012 Census of Agriculture.

(USDA 2012). There are agricultural professionals who recognize this and they have initiated several programs in the state with the goal of helping West Virginia farmers capture more of the money that the state's residents spend on food (WVU 2015). Due to the increasing demand for local food, many people began to hypothesize that enough food could be grown within West Virginia to feed all of the residents. A considerable number of researchers, politicians, activists, and scholars questioned this because of the state's "mountain and hollow" topographic features. A professor at The West Virginia University spearheaded a research project in order to settle the debates and serve as a pilot study to begin helping farmers reach a wider consumer base. She, along with several other members of the University and a local consulting service conducted an in-depth study of West Virginia farm production and concluded that the small, rugged, and peaked state does indeed have the space to source all of their livestock, fruit, and vegetable needs locally (Hartz, et al. 2012).

The majority of agricultural products are coming from small, family owned farms. The number of the broiler chickens that were sold in West Virginia seems almost impossible when compared to the other products as well as to the number of farms raising the chickens. The reason for this problematizes the nature of interpreting "small farm" without ethnographic research. The small number of farms raising chickens in comparison to the incredibly large number of chickens sold is made possible through contract farming operations. Companies like Purdue and Tyson contract farmers to raise chickens and then buy the chickens from them. While other products can also be under contract, chicken contract farming is common in West Virginia as well as many other states. Most of the farmers that talked with me about contract farming did not have the most positive sentiment toward it. There were issues of dislike for large corporations such as Purdue and Tyson as well as interesting discussions of small farms "that

weren't really small farms" because of the volume they produced. In the cases of contract farms, the acreage was closer to farmers' definitions of small farms; however the productivity levels were not.

Figure 8. A grain and vegetable farm. Photo Credit: Amanda Zickefoose.

Even though farmers expressed frustration over the vagueness of the term sustainability, they frequently used it to describe their own practices and philosophies as well as those of other farmers. It is therefore necessary to provide a critical examination of the term and in the next chapter I will discuss in more detail the concept of sustainability, how it developed, and the

numerous definitions ascribed to it. I will also contextualize it within my research project and describe how it is used within this dissertation.

3.0 DECONSTRUCTING SUSTAINABILITY

Sustainability is a concept that has been widely used and is often mistakenly understood as a concrete set of practices or methods. In addition to this misunderstanding, each sector of economic, political, and social life attempts to assign a definition to the term sustainability or a list of criteria that is specific to that sector. This leads to the assessment that something can be deemed "sustainable" whether it is a farm or a General Motors plant and often the conclusion determining this sustainable status lacks in breadth and depth.

The often narrow perspective is due to the problem that although corporations, governments, organizations, and individuals attempt to take into consideration as many factors as possible, there remains the almost exhaustive list of responses to the questions, "sustainable for whom?" and "sustainable for what?", thus problematizing the human – environment relationship. For example, the creation of Masoala National Park in Madagascar arose from an interest focused on environmental sustainability which strived to safeguard the island's unique biodiversity. However, the environmental protection of this 840 square mile park will have consequences for an increasing Madagascar human population who relies on this land for its rice production and who will have less land to cultivate and feed themselves (Kottak 2004). So the biodiversity of Madagascar is attempted to be sustained, but are its indigenous populations? The issue of what is being sustained and for whom needs to be recognized because the answers to these questions are not uniform in all situations (Stone 2003).

This type of labeling implies that sustainability characterizes a fixed state of being when in actuality it is a very fluid concept, fluctuating not only with different ideological worldview constructs, but also with the different issues that are posed to the sustainable process in question. Rather than supporting the argument that sustainability is in and of itself an obtainable and very specific reality and devising a new list of criteria, I argue that the term sustainability works more accurately as a way for individuals to talk about how they do something and why they do it. It is a specific rhetoric or discourse. For example, farmers who claim their farms are sustainable direct attention to their specific perceptions of how their farms fit into their view of the world, what they want their farms to be, what challenges they perceive in achieving this, and the decisions they have made to overcome those challenges. In this case, farmers will have different ideas of what sustainability will look like; they will have different goals, and different means to achieve these goals. The term is employed by farmers to explain to others, usually potential customers or other farmers, why they chose specific agricultural methods or practices.

Examining sustainability as a discourse provides an understanding of the formation of the term sustainability, the widespread use of it, the confusion surrounding it, and the contradictions infused within it. Discourse analysis reveals the unbalanced power relationships present in sustainability centered issues, programs, and ways of perceiving the world (Foucault 1978). This also makes it easier to recognize that *how* people perceive their world and their place in it is manifested in the multiplicity of meanings that have been assigned to sustainability. This type of analysis will prove to be much more significant as it reveals more about the values, beliefs, and ideologies that are often imbued in definitions of sustainability rather than a new list of criteria to which "being sustainable" must adhere to would reveal.

The discourse analysis also supplies my research with a more complete understanding of how the dichotomy between "conventional" and "sustainable" agriculture was produced and why it remains such a vital element to sustainability identities. The perspective that conventional farming methods and sustainable farming methods are in opposition to one another has been necessary to those organizations and individuals pushing a sustainability agenda. I will discuss this in more detail later, but this shouldn't be too surprising for two reasons:

1.) Sustainability is often the all-encompassing term used for different alternative agriculture models and so its origins are said to have arisen from a differing of opinion to conventional models; and
2.) If proponents of "new" methods want those methods to gain support, they need to create a rhetoric in which they differ completely from the perceived status quo.

Sustainability takes on many different forms due to the unique experience of the individual who fashions "definitions" for the term. For example, there is the sustainable small farmer who tells me when asked what sustainability means, "Well to me it means not taxing the earth too much and keeping the soil healthy". There are also those who benefit from harnessing the term and applying it to one's practices because of its economic value in today's society. Often referred to as "green-washing" people and organizations can advertise their practices or products as sustainable to attract consumers and often receive a higher price for their goods (Ikerd 2011). This "green" language becomes successful producers, manufacturers, and salespeople are able to operationalize sustainability rhetoric to align with consumes' discourse on sustainability. As one farmer explained to me that he does not really care that his cows are all grass fed, but it does sell for a higher profit. However, in my research this perspective from farmers was quite rare because with the exception of that farmer, the rest all believe in and support the sustainability rhetoric.

In addition to the individual framing of the term, there is also the role of the institution or organization which assigns definitions. The involvement of large institutions in sustainability rhetoric firmly established the (mistaken) idea that "sustainability" is a real thing, a discrete entity rather than a means to discuss one's personal interpretation of systems and how to work in and with those systems. The most widely used definition of sustainability comes from a report organized by the World Commission on Environment and Development (WCED 1987). This definition or some form of it has been widely used by individuals and other large institutions such as the United States Environmental Protection Agency (EPA 2013). When the many individuals and institutions use this definition, they somehow feel the term sustainability gains legitimacy, reliability, and credibility because it was fashioned by an organization which was established by the United Nations.

In the first, second, third, and fourth sections I examine the specific sustainability discourse of different sectors of society and academic disciplines, and how each has contributed to the overall discourse of sustainability. Within each sector or discipline the idea of what "sustainability" is changes as does the means to achieve it. This is why it is best to understand sustainability not as a discrete entity, but rather as rhetoric for the contexts in which people interpret the relationship between humans and the environment and the way that relationship should work. In another section I examine how sustainability rhetoric has been used as a platform to advocate Neo-Malthusian ideas of over-population problems. Finally, I explore how practices of alternative food movements such as organic agriculture and re-localization efforts have harnessed their own sustainability discourse.

3.1 HOW DIFFERENT SECTORS OF SOCIETY AND ACADEMIC DISCIPLINES UTILIZE SUSTAINABILITY RHETORIC

In the following sections I examine how different sectors of society and different academic disciplines have engaged with sustainability rhetoric and how they have crafted their own definitions and in so doing have contributed to sustainability discourse.

3.1.1 Sustainability, agriculture, and sustainable agriculture

Sustainability rhetoric often serves personal and institutional interests; it is about power and control and the formidable national and global forces at play. For instance, the United States Department of Agriculture has developed definitions for sustainable agriculture as well as an entire center, The Alternative Farming Systems Information Center, which serves as a database for such resources as educational and training opportunities in sustainable agriculture (USDA 2012). By developing a definition the USDA has aligned itself as custodian of what "sustainable agriculture" is. In other words, the USDA has the power to shape the sustainability sector by controlling, in part, which practices are defined as sustainable, what the outcomes will be, why sustainable practices are needed, and who should adopt sustainable practices. This is referred to as top-down management practices and is often heavily criticized for causing detrimental effects on local people (Escobar 1995).

Often the USDA focuses its efforts on converting smaller farms to sustainable practices, which seems unusual while the large, industrial farms receive subsidies and credits, and remain free of sustainability conversion efforts (Barbieri, et al. 2008, Holt-Gimenez 2006). Many of the conventionally-aligned farmers described that this interesting phenomenon is best explained by

asking who needs the USDA or rather who does the USDA need. They feel that the relationship between agriculture and the USDA has been drastically changing for the past several decades.

Conventionally-aligned farmers explained that agribusinesses have begun to usurp the roles of the USDA mostly in respect to large-scale, industrial farms. For example, Monsanto based in the US, Canada, Guatemala, Mexico, and Puerto Rico now dictates planting dates, seed types, and chemical input practices. The farmers of corporatized, monocultural farms often access their agricultural information through business corporations rather than government agencies. Large, powerful lobby groups serving the interests of large corporate farms often influence USDA regulations and the enforcement of regulations by the USDA.

Many of the conventionally-aligned farmers told me that smaller farms are usually not so tightly intertwined with agribusinesses, do not have as much power, and therefore have become the target of the USDA. The USDA needs sustainable discourse in order to remain relevant; remaining relevant means self-preservation. The sustainable agricultural programs are then bestowed upon small farms not aligned with major corporations through avenues such as funding opportunities and land grant universities' agricultural extension programs. Many of the conventionally-aligned farmers feel that because they lack powerful lobby groups, their small farms are easier to regulate.

For example, West Virginia University's (WVU) agricultural extension program (along with other land grant universities) researches and disseminates information to farmers concerning practices that are sustainable in the mind of that specific extension researcher as well as program criteria that are passed down from the United States government. This highlights the problematized nature of "sustainability" and demonstrates the difficulty of understanding whether a farm is "sustainable" or not because WVU's extension program leaders not only have

their own preconceived notions of sustainability, but are also enmeshed in the localized issues and contexts of their specific region. This example also follows that farmers have different definitions and practices of sustainable farming that might not sync with the institution's plans.

A USDA partner organization, Sustainable Agriculture Research and Education (SARE), has implemented state-wide programs built upon its mission statement of sustainability. One of its programs, "Accessing Higher-Value Markets", aims to help producers respond to the growing consumer demand for fresh, local products. The program is administered through the "train the trainer" model in which Cooperative Extension staff, Natural Resource Conservation Service field personnel, and other professionals will be trained in four key areas: appropriate market placement, meeting demands, successful production, and networking (Singh-Knights and Wilson 2012). The *trained* personnel and staff will then teach what they know to the *untrained* farmers.

These types of programs through the rhetoric of sustainability shape and change the decisions and practices of individual farmers as well as the community of farmers, therefore becoming a central force in producing, reproducing, and operationalizing what constitutes as "sustainable". In the case of SARE the rhetoric that is employed often associates "sustainability" with food that is fresh and local. In addition, the discourse of "who is trained" translates to someone is who more appropriately situated to understand what would be best for any given farm. This causes a disproportionate ownership of knowledge. Our Western science and institutionally educated culture often prevent us from questioning this aspect of credibility based upon a very specific type of acquired knowledge.

`One reason scholars specializing in agriculture become interested in sustainability issues is because of a belief that all farms impact the environment and their local community to varying degrees (D'Souza and Ikerd 1996). The more common method of agriculture is now industrial

agriculture, which is characterized by an increase in farm size, mechanization, and an accompanying reliance on off-farm inputs, specialization, and globalization. A central issue regarding these practices is the cost to the environment and is often emphasized in sustainability rhetoric by utilizing the term *unsustainable* as a means to encompass everything that the current industrial food system fails to accomplish. This type of critique provides the opportunity for not only individual farmers to advocate their specific "sustainable" practices but also for academics to conduct studies as to what is more "sustainable".

For example, a study conducted by Gerard D'Souza and John Ikerd examines the relevance of farm size in relation to sustainability. They argue that, "to the extent that, the larger the farm, the greater the natural ecosystem it displaces or landscape it dominates, large farms individually and collectively create greater ecological disturbance" (D'Souza and Ikerd 1996:74). The authors established a model with which to compare small farms and large farms in relation to sustainable objectives. They draw from the work of Clement A. Tisdell, a professor of economics, for a definition for sustainable systems.

According to Tisdell a sustainable system includes, "the maintenance of intergenerational economic welfare; existence of human beings indefinitely; sustainability of production and economic systems in terms of their resilience and other properties; sustainability of community; and maintenance of biodiversity" (D'Souza and Ikerd 1996: 76). D'Souza and Ikerd conclude that small farms are more sustainable than larger farms based upon Tisdell's model for a sustainable system (D'Souza and Ikerd 1996). There has been additional scholarly work which critiques D'Souza's and Ikerd's study and poses a different set of "sustainability" indicators. For example, urban spread is beneficial to rural areas because it improves rural welfare through property value and large industrial farms can use Geographic Information

Systems to adjust their chemical applications in order to use the minimal amount (Henry 1996). Both of these studies demonstrate again the fluidity of the concept and how it can be used to discuss varying degrees of practices.

3.1.1.1 Commodity agriculture and civic agriculture

Another way to conceptualize sustainable agriculture rhetoric is to juxtapose the practices and characteristics of two different farming systems: commodity agriculture and civic agriculture because the rhetoric adopted for each of these systems is very different. These two systems epitomize the divergent trends within the U.S. food system and they are reinventing the agricultural landscape. By using this type of comparison it becomes clearer how different the rhetoric of sustainable agriculture is from conventional agriculture. In fact, the sustainability rhetoric arose from criticisms of conventional, industrial agriculture.

Thomas Lyson and Amy Guptill describe the foundational principle of commodity agriculture as producing as much food and fiber as possible with the cheapest cost (Lyson and Guptill 2004). They argue that productivity and efficiency guide this farming system and that it is concerned with neoclassical economic factors such as production, land, labor, and capital. "Whereas commodity agriculture is integrated into a global and corporate-controlled food system, civic agriculture is tied into local or regional markets, most often through direct sales to consumers" (Lyson and Guptill 2004: 371). Lyson and Guptill believe that civic agriculture is fundamentally different than commodity agriculture. For example, the conceptualization of civic agriculture is based on an alternative to commodity agriculture's fragmented system of food production and that small organizations are linked by a sense of place, not by sharing the same goals the owners or top executives possess.

Civic agriculture rhetoric encompasses more than language which opposes the global, corporately-dominated food system. For instance, Laura DeLind (2002) argues that in addition to civic agriculture's practices of localized production, distribution, and consumption, it also "widens the scope of ag-related concerns… it moves away from a strictly mechanistic focus on production and economic efficiency and toward food and farming systems responsive to particular ecological and socio-economic contexts" (DeLind 2002: 217). Therefore, in this case the rhetoric utilized to discuss sustainability in relation to civic agriculture embodies not only production, distribution, and consumption, but the ecological and socio-economic contexts as well. Although this is what the rhetoric is, research has found that sustainable agriculture is still often criticized for being concerned with production and production issues just as much as conventional agriculture (Allen 2004).

DeLind also strongly cautions however that civic agriculture is at risk to fall into the same shortcomings as any endeavor, in that in most cases it focuses most intensely on creating economic infrastructure rather than on a communal inner structure. Sustainability rhetoric has a place under the broader category of civic agriculture and so practices that are described as sustainable run the same risks that other forms of civic agriculture do. Delind encourages people to move past the one-dimensional nature of producer on one side and consumer on the other and suggests that in addition to establishing a marketplace which fulfills the wants of producers and consumers, there also needs to be a sense of citizenship that connects and inspires the belonging, the identity, and civic engagement that allow us to focus on the power of all environments. People subscribing to this type of "sustainability" advocate a land ethic in which they are engaged, responsible, and held accountable (Berry 1965, DeLind 2002, Leopold 1948).

In relation to the type of "sustainability" that DeLind discusses, the rhetoric draws upon not only relationships between humans and the environment, but also relationships between people and other people. Specifically that people engage with one another on a more intimate level and view each other in a more inclusive association. This type of rhetoric has been gaining in popularity and builds upon the "systems" rhetoric of the Club of Rome and interjects the human as a player in the system, not only in the sense of human – environment relationships, but human – to - human – to - environment relationships as well.

3.1.1.2 Empowering the small farmer: sustainable practices and a perception of control

The issues of sustainable agriculture rhetoric are heavily incorporated into my research as many of the farmers who have talked to me about choosing to become involved in agriculture have done so because they wanted more control over their food, their land, and their role in the earth's larger biological systems which they often describe as "being more sustainable". I heard different definitions of sustainability from farmers and even different definitions from husbands and wives, just as there have been from different organizations, authors, and disciplines.

Farmers often select specific points that they want their farms to adhere to such as practices that include:

- Not using chemicals that will harm the soils, animals, and people;
- Remaining small so that transportation and packaging costs (environmental and economic) do not have too much of an impact;
- Maintaining relationships within the community so that the production and consumption elements operate within a small circuit (Henry 1996, Welch 2010).

It is exactly these points that farmers then harness the sustainability rhetoric with which to discuss their ideas, work, and goals. For example, a sustainability-aligned farmer explained to me that using a pour on medicine to treat her goats' lice problem is not sustainable for her

family. When I asked why that it is not sustainable, I received a complexity of answers regarding the issue:

> The goats' milk, which my entire family drinks, will absorb the chemicals and become concentrated in the milk and we do not want to drink that. Also these store-bought, pour on medicines do not treat the problem but rather the symptoms and sometimes I even think those medicines can make the problem worse, or cause another problem. And I don't know how much of that stuff ends up in the ground after it passes through the animal, then I have it in my land too.

Most farmers choose several aspects on which to focus and these clearly relate to a specific set of ideologies concerning their view of the world. The farm then becomes the space in which these ideologies are operationalized in order to capture some control over how the world is perceived to work outside of their farm. For many of the farmers who align themselves with sustainability, the rhetoric and the practices become a way for them to create the kind of micro-world that they prefer to live in contrasted with the macro-world in which we all must interact to varying degrees.

Conversations surrounding farm finances and sustainability create a clear well-defined window into how farmers negotiate the micro - world they ultimately want and the macro - world in which they must live from time to time. Typically these conversations encompass the topic of farm expenses. While I was helping install an irrigation system on a farm, the sustainability-aligned farmer looked over at me while holding the plastic tubing used for the ducts in his dirt covered hands and said:

> See, this is where economic sustainability and environmental sustainability become tricky, not that I always make the two separate issues, but it can make talking about them easier. This plastic tubing I use for the irrigation system is not completely disposable and not sustainable, but it's cheap and I can afford it right now. It'd be great to use something different that is easier on the environment, but for right now this is what I have to use if I want to make sure everything gets

enough water. See, I'm also using drip irrigation which is better than just sprinklers, so the soil will capture more of it and use less water.

Figure 9: Black plastic tubing used for irrigation. Photo Credit: Amanda Zickefoose.

Although it seems these farmers have ideas of what they believe is a more sustainable farming practice; their ideas of sustainability are fluid and can change depending on the situation

and variables within that situation. I refer to this practice as trade-offs and discuss it in more detail in chapter 4. Farmers do recognize that some of the methods they choose to incorporate into their farm might require the use of products that might make them uncomfortable from their particular viewpoint of sustainability, but analytically this reveals which aspects of those viewpoints they prioritize and why.

Many times there are choices they can make that they at least feel are the "better" choice. For example, the type of irrigation system pictured above is called a drip irrigation system and the farmer connects the plastic tubing to a water holding tank and from there places the tubing along each row of crops. There are tiny holes in the tubing that allow water to seep out and penetrate the ground right alongside the crops. When the farmer turns the water on by opening a series of valves the water fills the tubes and trickles out of the holes directly onto the soil surrounding the plant providing a concentrated system of irrigation. This is juxtaposed with the sprinkler irrigation systems in which water shoots out of a diffuser into the air and falls on top of the crops. The argument from the sustainability viewpoint is that the drip irrigation system uses less water and loses less water to evaporation and run-off than the sprinkler system, but in most cases the economic costs are more. So even though this drip irrigating farmer chose to use irrigation, he did put more money into that type of system, but saved money with plastic disposable tubing.

3.1.2 The global agri-food system

Other scholars and researchers relate the ideas of sustainability specifically to food security and this causes the rhetoric to change. Not only do natural disasters, such as droughts and floods contribute to food (in)security, but so does the global agri-food system (Schubert, et al. 2010).

One way in which it affects sustainability is because the global agri-food system operates under the model of liberalized trade and this type of model permits the reduction of reserves to sell into the global marketplace (Lawrence, et al. 2010). For example, prior to the North American Free Trade Agreement (NAFTA) in 1994, Mexico instated a policy that it would remain self-sufficient in corn. However, after the signing of NAFTA this policy was replaced with a "cheap-food-for-the-cities" policy. Corn produced in the U.S. flowed into Mexico and the small-scale farming areas that were in control of the domestic supply were labeled as "low productive potential". This also resulted in many of the farmers being forced to leave their farms and migrate to large cities in order to provide for themselves and their families (Lawrence, et al. 2010).

The global agri-food system does not largely promote agricultural diversity, cultivate regional prosperity, improve environmental integrity, sustain biodiversity, or base itself upon a fair platform of production, sale and delivery (Lawrence, et al. 2010). These elements have been targeted by critics using sustainability rhetoric to argue that because of these failings the current global agri-food system cannot attain food security. In addition, packaging these elements as failings is part of the sustainability rhetoric used to criticize this type of system.

In this case as in many, those employing the sustainability rhetoric follow an expanded systems thinking in that all of the components of the global agri-food system: the farm, input manufacturers, producers, packagers, suppliers, and retailers are interrelated and as a consequence attention needs to be recognized and practiced along each part. Therefore, the rhetoric used to discuss sustainability in this way revolves around the evaluation of multiple elements that have been deemed to operate within interlocking systems. For example, someone utilizing this type of sustainability rhetoric would talk about Mexico's practice of purchasing

corn from the U.S. as "not sustainable" for Mexico because the people of Mexico do not have control over the yields or prices and many Mexican farmers cannot compete with the cheap imported corn. However, we also need to consider the sustainability rhetoric used by the agri-food businesses themselves. This often includes content which highlights the mass – production of food as an effective strategy because through this means we are able to feed the hungry and non-hungry all over the world.

Food security also needs to be deconstructed because its meaning does not always convey its multiplicity. For example, many believe that the U.S. boasts sufficient food security, however food security is not simply access to food, and recently scholars have introduced the quality of food and the consequences of food production as two more factors comprising food security. This pertinent point strongly relates to my work as the farmers have often included the quality of their food into their sustainability rhetoric. For example, a sustainability-aligned farmer explained to me that, "these carrots were just picked this morning when their nutrient content was high". For her, this is in direct contrast to operations of the global agri-food system which enables carrots to come from China yet consumed in the US. She explained that, "those carrots are harvested too early and transported too far; both of these practices reduce nutrient content".

For this farmer, nutrient content is part of her sustainability ideology and rhetoric. This is an example of how small farmers and the national platform of food security policies actually share a common aspect of sustainability which is that they each create their own specific definition for the quality of food. Although the small farmers in my study regardless of sustainability and conventional alignments boast that their foodstuffs are high in quality because their meat has not been raised in confined animal feeding operations (CAFOs) and is fresher than

industry meat, and their produce is healthier because it was not harvested too early as to prevent full nutrient potential when ripe.

3.1.3 Sustainability, development, and sustainable development

For hundreds of years, the people of Third World countries have endured the scrutiny and judgments of individuals in First World countries, which have often been based upon a perception that the Third World populations cannot think or act for themselves. In many cases, colonialism was one of the first forces that manifested the self-proclaimed superiority of First World countries. Shortly after the exploits of colonialism, development projects were launched onto the shores and lives of the "undeveloped" countries. Colonialism and development projects frequently share a foundation based upon an incomplete assessment of how "others" live, and a top-down management plan for how to "improve" lives is often instituted[13]. Unfortunately, in some instances sustainability rhetoric is being used to further the misguided pursuits of development projects.

For example, in 1971 several United States agencies identified problems of malnutrition in Latin American and established the Inter-Agency Project for the Promotion of National Food and Nutrition Policies (PIA/PNAN). The project circulated information concerning hunger, malnutrition and the procedure for establishing a national food and nutrition plan. Following the inception of this project, a group of Colombian planners presented a plan during a regional meeting of PIA/PNAN for their country to be the first to build a comprehensive national food and nutrition plan in Latin America. After the plan was approved, implementation began in 1976

[13] I should be clear that not *all* colonial and development endeavors operate along this platform.

with funding from the Colombian government and loans from the World Bank. The plan focused on small farmers, and a variety of applied health, nutrition, and food programs. Some of the farmers and people within the programs were identified as peasants and lactating women, who then became the targets of an onslaught of food and nutrition policies because they were viewed as barriers to a nation free of hunger and malnutrition (Escobar 1988).

The PIA/PNAN program is very similar to a sustainability program because they are both managed by individuals who interpret a situation as being a specific kind of problem that has a specific kind of solution. The situation is a broad framework of human–environment relationships, but the supporters of PIA/PNAN interpret their situation as a problem of malnutrition and hunger while advocates for sustainability interpret theirs as a problem of finite resources. The different interpreted problems then constitute different solutions, either a health plan or a sustainable practices plan. Thus, whether it is a health plan or a sustainable practices plan it is still one group of people's ideas and beliefs about the nature of human-environment relationships imposed upon another group of people. Institutions often create the categories for what is "unsustainable" and "sustainable", who needs to become more "sustainable", and how those people will accomplish that transition. Arturo Escobar's work on development supports this argument because what has happened with development (and is still happening) is now occurring with sustainability rhetoric.

> What should be emphasized, however, is how institutions utilize a set of practices in the construction of their problems through which they control policy themes, enforce exclusions, and affect social relations. One such practice, for instance, is the production of labels ("small farmers," "illiterate peasants," "pregnant and lactating women," etc.) which the appropriate programs would treat and reform. These labels – and, in general, the professional discourses that sustain them – inevitably structure the encounter of the organization and its "clients" (e.g., peasants) in such a way that the latter's local reality is transcended and elaborated upon by the former. In the process, peasants are organized by the development

> apparatus as producers, or as elements to be displaced, modernized, or "integrated" into the national economy. In other words, they are managed and controlled, obliged to maneuver within the limits posed by the institutions. [Escobar 1988: 435]

This succinctly describes how institutional development programs usurp identity and transform it to encapsulate the essence of the perceived predicament in such a way as to create a misleadingly clear presentation of, "Here is our problem, it is them, the peasants and the lactating women, they are our problem. We just need to properly educate them and Latin America's hunger and malnutrition will end". Sustainability rhetoric is very similar. For example the United States Department of Agriculture (USDA) discusses sustainable development as the following:

> The U.S. Department of Agriculture is committed to working with partners and stakeholders toward sustainability of diverse agricultural, forest and range systems. USDA seeks to balance the goals of:
>
> - Satisfying human needs;
> - Enhancing environmental quality, the resource base, and ecosystem services;
> - Sustaining the economic viability of agriculture;
> - Enhancing the quality of life for farmers, ranchers, forest managers, workers and society as a whole.
>
> The USDA integrates these goals into its policies and programs, particularly through interagency collaboration, partnership and outreach at both domestic and international levels. USDA encourages the development and adoption of place-and-scale-appropriate management, production, distribution, and information systems that advance continuous, integrated progress toward all of these goals across landscapes, supply chains and markets. [United States Department of Agriculture 2014]

With this mission statement we see the remnants of Escobar's words, "controlling policy themes, enforcing exclusions, and affecting social relations". We also see how "the latter's" (in this case small farmers') "local reality is transcended and elaborated upon by the former" (in this case the UDSA). "In the process, [farmers] are organized by the development apparatus… as elements to be displaced, modernized, or 'integrated' into the national economy. In other words,

they are managed and controlled, obliged to maneuver within the limits posed by the institutions" (Escobar 1988: 435). This is particularly important when considering how much power the USDA wields. The USDA "is the largest cabinet department after Defense and Treasure Office and it administers more regulatory laws and programs than any other government agency" (Allen 2004: 54). As Krebs notes concerning organic standards and certification:

> These proposals would give the USDA a "legal monopoly" over the term organic as only one organic label 'USDA Organic' would be allowed. In addition USDA would have complete control over appointments to the NOSB; suggesting if history is any teacher that once the board was appointed USDA could and more than likely would weaken the NOSB by appointing people sympathetic to corporate agribusiness, food irradiation and genetic engineering. [DeLind 2000:200]

3.1.4 Economics

Another branch of social life concerning issues of sustainability rhetoric stems from an economic perspective in that capitalistic economies are inherently extractive and exploitive. These economies rely on natural and societal resources for their production and therefore must continuously draw from them to fulfill their (unrealistic) requirements. Most economists discuss sustainability in terms of "external costs" and translate environmental elements (rainforests, streams, air quality, etc.) into monetary value. For example, a market based response to increased sustainability discourse has been the cap-and-trade system which regulates carbon dioxide and other greenhouse gas emissions. Deriving from the Kyoto Protocol the cap-and-trade systems or "carbon trading" is a policy by which some governments have capped certain greenhouse gas emissions. However, the country or the company may still exceed their cap and they can do this by purchasing "permits" from other countries or companies that have a lower

output of emissions. This offsets those countries/companies that break their cap because the lower emitting countries/companies did not use all of their allotted permits (Morgan 2006). The market logic is that those who produce higher emissions will have to pay financially for them and those not producing as much will be rewarded. There is also the process in which wealthier governments and companies that are also producing high carbon emissions can pay others to reduce carbon emissions on behalf of the paying government or company.

These systems have become an accepted policy operating in many countries (Morgan 2006). Currently the largest emissions trading scheme is the European Union Emissions Trading Scheme. The United States does not have a cap-and-trade policy for carbon, but they do for sulfur dioxide and have been utilizing the cap-and-trade for several decades in regards to lead and chlorofluorocarbons. Several northeastern states within the U.S. as well as California have, however adopted state regulations for certain greenhouse gas emissions such as nitrogen monoxide (EPA 2012). There are about forty countries and more than twenty cities, states, and provinces around the world using or planning to commit to use a price on carbon to decrease greenhouse gas emissions (TWB 2015b). However, this type of market-based sustainability policies can perpetuate the idea that some environmental resources may have little or no value other than economic value.

John Ikerd is an economist who writes extensively on sustainability and offers quite a different perspective in regards to achieving sustainability. Ikerd relies on a rhetoric that in order to address issues of sustainability, the worldviews of individuals and cultures must be recognized and considered because he believes these are what form perceptions of sustainability. Worldviews are based upon foundational beliefs or what he refers to as *first principles* which are considered by the individual or culture as *truths*. Since these first principles are beliefs

understood as truths they cannot be proved or disproved (Ikerd 2005). For Ikerd, "sustainability" in this sense cannot be approached with statistics or logic because it is rooted in a system of beliefs and it must have as its goal a social and moral consensus.

Ikerd's understanding for the need for sustainable practices comes from his concern that humans' participation in overconsumption and military conflicts as well as their growth in population will have drastic consequences for life on earth such as creating an environment that is uninhabitable for humans (Ikerd 2005). His ideas then become part of the rhetoric he uses to discuss sustainability such as capitalistic economies being naturally extractive and exploitive so for him he does not see economics or the market as being capable of addressing sustainability issues.

For Ikerd and those sharing his opinion, it is the amassing concerns for the impractical continuous growth and economic development that drives the need for a sustainable economy and therefore will be reflected in his sustainability rhetoric. He believes that the rising ecological and social costs greatly dwarf any economic benefits. He criticizes all previous economic systems such as the guild, mercantilism, free market, and free trade for all sharing the same fundamental flaw: they all lacked sustainability in that continuing growth cannot be sustained through production and greater individual or societal well-being cannot be sustained through greater wealth (Ikerd 2005).

Those who subscribe to "previous economic systems" sustainability rhetoric place economics at its center and believe that the changes that are necessary to develop a more "sustainable" society can be achieved through economic adjustments, incentives, and disincentives such as the cap-and-trade policies. However, new economics characterizes a much more inclusive realm. This economics seems to include a rhetoric based on more than just

supply and demand or the bottom line because it includes worldviews or first principles. The language also encompasses the initiative to design an economic system that does not benefit one social group over another, but rather balances the wealth and well-being among all groups.

Ikerd's rhetoric calls for individuals, governments, and corporations to adopt more "sustainable" practices because they have completely changed the way in which they view the world, their place in it, and their relationship to others as well as the planet not just because of increased regulations. The question that he leaves unanswered is of course, how to execute such a transformation. Ikerd has also fallen into the "broad, sweeping" definitions that have been so commonly characterizing sustainability literature. It seems that he does understand that sustainability is just another way to interpret and talk about the human-environment relationship because his model requires a revolutionizing of the conceptualization of this relationship that is internally constructed rather than externally enforced.

In relation to economic market policies and also of concern to the previous section titled The Global Agri-food System, standardization has been adopted in the agricultural sectors in order to achieve a more marketable product. I have mentioned quite a few times already of the socially accepted, quantified nature of sustainability rhetoric in that a product or practice can be marketed as "sustainable" through statistical analyses of this factory reducing emissions or that company boosting recyclables. In this sense there has been talk to standardize sustainability. Lawrence Busch identifies the role of a team of players that have become imbedded in setting definitions or rather *standards* for just about anything (Busch and Bain 2004, Busch, et al. 2005, Hatanaka 2005). The team of players is actually mega- organizations such as the International Organization for Standardization, The International Telecommunication union, and the International Electrotechnical Commission. The standards development organizations put forth a

tripartite standards regime, i.e. a regime that includes standards setting, accreditation, and certification.

Standardizing sustainability may seem like a good idea, but often the main reason for standardizing anything is because in order for objects to become transactable entities there is a need for standardization and sustainability would not be an exception. Therefore, the impetus for standardizing sustainability would be to make selling it easier. In addition, once this occurs, the standards development organizations and national accreditation bodies become incredibly influential in the supply chains. The end product is a form of *governmentality* rather than a government, which is a government controlled through the market (Loconto and Busch 2010). Taking this into account highlights the political and convoluted nature of the future of sustainability and locates it within a specific platform of *marketing* sustainability.

The organic movement has seen the consequences of standardization. There are actual national standards regulating whether a farm can be certified USDA organic or not. The USDA controls this certification right now. Under the National Organic Program there are three target areas:

- **Organic crops -** The USDA organic seal verifies that irradiation, sewage sludge, synthetic fertilizers, prohibited pesticides, and genetically modified organisms were not used.
- **Organic livestock -** The USDA organic seal verifies that producers met animal health and welfare standards, did not use antibiotics or growth hormones, used 100% organic feed, and provided animals with access to the outdoors.
- **Organic multi-ingredient foods.** The USDA organic seal verifies that the product has 95% or more certified organic content. If the label claims that it was made with specified organic ingredients, you can be sure that those specific ingredients are certified organic. [AMS 2015]

The consequences of standardization can be profound and can inhibit the original principles and goals of alternative food movements. Although a possible reason for standardization was to

make decision making easier on the consumer, power and politics become intertwined in the process and ultimately the standards reflect the interests of individuals within powerful institutions. For example:

> In fact, standards and the processes that uphold them are, according to Burke and Ornstein (1995:201), tools of the axemakers – the creators and managers of technical innovation and knowledge. They are used to "cut and control" reality. "Throughout history, mysterious axemaker knowledge always strengthened social conformity as at the same time increasingly distanced the change-makers and their institutionalized masters from the general public whose lives they controlled". [DeLind 2000:200]

A main concern of the standardization process is that the peculiarities of specific cases, regions, cultures, and individuals will be forfeited to meet "a one size fits all" uniformity. With the mass produced regulation of what defines organic, the uniqueness of situation and "case –by-case" analysis will be lost (DeLind 2000). Although many of the small farmers in my study describe themselves as adhering to an organic philosophy, they do not certify their farms with the USDA National Organic Program (NOP). However, their practices are often stricter than those stipulated by the NOP, which is often hidden by the lack of a nationally certified institutional label. This is because the NOP allows farmers to utilize chemical sprays such as fungicides and pesticides as long as those sprays are also certified organic. The sustainability-aligned farmers in my study try to refrain from using any pesticides and sometimes can go entire seasons without spraying or only spraying certain crops rather than others. When I asked them about this practice they explained to me that, "those organic sprays might not be 100 percent safe. They are better than non-organic, but even plant based chemicals can be poisonous." They gave examples such as poison ivy, the leaves of rhubarb, and even the leaves and stems of a tomato plant. They told me that if they can manage the soils and weeds without having to use organic sprays than that is the best option.

Standardization tends to occur more within a global scale rather than at a local farmers market, but they would be affected as well. In the absence of a face-to-face interaction in which farmers can explain the practices behind their products, buyers such as large distributing companies want assurance of the goods they purchase (so that they may pass these on to *their* customers) and standards offer a means to acquire that. In this context, large organizations such as the standards development organizations can then set standards to which producers adhere such as what it means to "sustainably" raise cattle.

Although smaller business transactions such as farmers' markets may not have large standards development organizations governing their practices they do still have practices to which they can adhere that have arisen from sustainability discourse. Some of the farmers I've spoken with explain to me that they often feel they are "defending" their chosen methods and practicing to customers because the customers come to purchase goods with preconceived notions of what it means to be "sustainable". For example, a sustainability-aligned farmer selling beef at a farmers' market told me that a customer asked where she got her hay to feed her cattle. The farmer explained that she bought it from Philadelphia. The customer was shocked and couldn't believe the farmer didn't either produce her own hay on her own farm or obtain it locally. The farmer tried to explain her own ideas of sustainability in that her cows' nutrition was more important than purchasing local hay, besides her purchase helped a farmer in Philadelphia, but this did not satisfy that particular customer.

I've found that this type of conversation is not rare when discussing issues of sustainability. In fact these types of disagreements on what it means to be "sustainable" occur within the same households as well. Husbands and wives disagree on which practices they want to employ, how to treat livestock with lice, and to which restaurants to sell their eggs based upon

different ideas of what it means to be "sustainable" while also attempting to balance such factors as cost of transportation and money received from the sale. In addition, many of the farmers would agree that they are *not* sustainable, but rather they are working toward it. These different conversations that surround "sustainability" whether a farmer trying to sell her beef or a husband and wife setting up their business plan demonstrate the fluidity of the concept and how in different situations and contexts the way in which something is talked about being "sustainable" changes. Setting up standards to which farmers must adhere in order to be marketed as "sustainable" would more than likely cause more dissention among farmers agreeing with or disagreeing with the new standards as we have painfully witnessed with the USDA's organic standards and certification program.

With the exception of one farmer, all of the sustainability-aligned farmers adamantly oppose membership in the USDA's certification program because they do not agree with the standards, regulations, or guidelines. They do not like what the organic movement has become as far as the increasing participation of agribusinesses and large industrial-like farms that can access organic certification. Farmers explained to me that those farmers are disconnected from the product because they use a lot of chemical sprays to treat symptoms rather than try to fix underlying problems, even if the sprays are certified organic.

The farmers in my study will refer to themselves as organic, often clarifying *not USDA organic* and then explain what organic means on *their* farm. There are other certifications that are cropping up that several of the small farmers like much better than organic certification. One of these certifications is Certified Naturally Grown (CNG). According to their website, CNG is "The Grassroots Alternative to Certified Organic" (CNG 2015). CNG grew out of a need for an alternative certification program when farmers in 2002 baulked at the new USDA organic

requirements and announced they would not participate in the program when it became instituted later that year. Although the CNG is still a certification and still has standards it is much more flexible than the USDA's NOP certification process. For instance, CNG is created by small farmers for small farmers. Also within the USDA organic certification, farm inspectors are not allowed to make recommendations or offer advice to the farmers on how to improve their farm or correct a problem.

CNG inspectors are encouraged to collaborate and share insights with the farmers (CNG 2015). In addition, the CNG farmers within my study explained to me that CNG inspectors are regionally connected and farmers will inspect each other's farms. This practice came from the idea that farmers within the same bioregions will be more familiar with the kinds of problems their regions face such as pests and fungi. They may know each other or they may not, but a rotation is also required so that the same farmer is not inspecting the same farm. Also one sustainability-aligned chicken farmer expounded upon another difference between CNG and certified organic with regards to living conditions and access to pasture. "See, before with the organic stuff people could get away with saying the chickens are free-range when all they did was open the door to their coop, but the chickens might not actually go outside. Certified Naturally Grown makes sure the animals are primarily out in the pastures."

Figure 10: Pasture raised chickens. Photo credit J. Reef.

3.1.5 Neo-Malthusian foundations

Other aspects of sustainability rhetoric have a common root which entails a fearful, yet calculated concern for the collapse of modern society. Some of the rhetoric uses fear and draws its "evidence" from case studies of historical civilizations which collapsed in large part from overwhelming environmental stresses. It is this version of sustainability that is often compared by critics of sustainability to a fundamentalist belief system with all the ear markings of following an environmentalism doctrine complete with a specified apocalyptic ending. Lester

Brown, founder of the Worldwatch Institute,[14] argues in his book *Building a Sustainable Society* (1981) that unless circumstances change modern society will collapse and he draws upon two case studies of different geographical locations to support his rhetoric. His first example comes from ancient Mayan civilization and he explains that evidence based on core samplings from two lake beds in the area have helped to narrow the reasons for the Mayans' downfall. The scientists at the University of Chicago and the University of Florida postulate that the depletion of soil due to increased population pressure strongly contributed to the collapse of Mayan civilization (Brown 1981, WI 2013).

Another example which Brown uses to support his sustainability rhetoric comes from the Tigris and Euphrates River Basin. For a long time it was believed that the fall of this civilization was due to outside invaders, but Brown argues that more recent research reveals environmental stresses undermined society here as well. Specifically, scientists have discovered that the well-developed irrigation system did not have any drainage components and the heavy use of the system caused the water table to rise and inundate the soil with salt which essentially poisoned the food supply. Brown's rhetoric that modern society will collapse is based upon his conclusions from the Mayan and Tigris/Euphrates experience and he feels that modern society is already demonstrating the signs for a collapse.

Brown identifies the signs of collapse as soil erosion, the unsustainable relationship that has developed between civilization and biological systems, and the potential depletion of oil reserves. He advocates that all of these signs negatively affect the food supply and that one-fifth of the world's cropland is already losing more of its topsoil faster than it is replenishing it. The

[14] The Worldwatch Institute is an environmental research organization that develops projects focused on sustainability worldwide.

loss of topsoil is not only due to erosion and depletion of nutrients, but also human lifestyles as well such as urban sprawl, village expansion, and highway expansion which gobble up the prime resource (Brown 1981, Lang 2010). All of these problems – soil erosion, the unsustainable relationship between civilization and the environment, and depletion of oil reserves are part of Brown's rhetoric on sustainability.

There have been strong critiques of Brown's ideas which highlight his overly simplistic and deterministic perspective of the relationship between environmental stress and social change. For example, drought has been cited as an environmental stress that can contribute to collapse, however it can also stimulate the design for improved water management such as irrigation. Such critiques are espoused by Costanza and colleagues who call for a much deeper comprehension of the human-environment system in order to understand the past and calculate the future in order to create more "sustainable" lifestyles. They caution the importance of recognizing that humans are *a part of* nature, not *apart from* nature and that in this modern, globalized world the problems that society faces are overwhelmingly inter-connected. Social or environmental problems in one context threaten the entire system (Costanza, et al. 2007). The rhetoric that Costanza and colleagues use is more closely related to that of Laura DeLind with her contribution to sustainability discourse in that humans on the citizenship level are also considered (DeLind 2002).

Another aspect of sustainability rhetoric is how to solve the perceived problems and there are those who argue for the need to reindustrialize and increase production to re-capture rapid growth. In other words, growth will solve the problems. However there are also those who argue against "growth as a solution" and maintain that the approach only addresses the symptoms, not the causes. The anti-growth rhetoric indicates an entire reordering of economic

focuses and population regulations based upon fundamental economic and social change. Brown provides a picture of what this kind of sustainable society would look like: efficient energy practices and uses, renewable sources of energy which fuel the economy, and a stationary population size (Brown 1981).

Problems arise when population controls are instituted to only certain population groups and measures are taken to alter their reproductive practices. Unfortunately, sometimes this is how sustainability rhetoric is enacted, similar to colonialism and development rhetoric. For example, according to the United States Agency for International Development (USAID), Haiti has a population problem which contributes to their poverty problem and therefore, USAID has established family planning programs for the Haitian women. It is often areas that are deemed "underdeveloped" and "poor" that are subject to this type of intervention and external "aid". Catherine Maternowska, a medical anthropologist, conducted ethnographic research regarding the role and consequences of USAID's family planning programs in Haiti. Maternowska learned that despite Haitian women's desire to have fewer children many of them were not keen on participating in the programs. She discovered that although one of the goals of the program was to empower women and give them more choices, women felt too controlled by family planning. Maternowska also uncovered that many of the decisions surrounding reproduction and family planning resulted from a gender inequality that has roots in Haitian beliefs and household structure (Maternowska 2006).

This example demonstrates the issues of power, regardless of cross-cultural differences and preferences. There is a bias concerning who should reproduce, how much, and when it becomes a problem. Sustainability rhetoric as approached through overpopulation arguments

can contain elements of value laden beliefs concerning identity, status, and control and can be used to enact these types of programs.

Ester Boserup (1965) offers a unique and countering perspective to the idea of neo-Malthusian threats. She argued that population growth will not pressure the earth's resources in ways that will be detrimental to all of humankind; rather it is humankind that will be pressured to find solutions through technological means. This type of rhetoric includes the opportunity for innovation as people respond to the pressures by necessity and invent new ways to deal with those pressures. According to this idea, agriculture is not necessarily viewed as progress in relation to other subsistence strategies such as hunting and gathering, but rather as an *adaptive strategy* that is considered to be neither progress nor regression (Boserup 1965).

There is a discourse surrounding the issue of whether or not agriculture is "progress" and arguments include concerns of over-farming the land, depleting the topsoil as well as its nutrients, erosion, and creating unequal distribution of resources (Thrupp 1993). Although, it has afforded society many luxuries and access to cheap food, there are negative effects when juxtaposed with other less invasive subsistence strategies (Lenkeit 2009, Turnbull 1987). For example, the !Kung San in Botswana are often characterized as living rough and difficult lives, but the adults only average a couple of days per week doing subsistence work and spend much of their time engaged in leisure activities (Barlett and Brown 1985). Boserup's ideas of adaptive strategies are still recognized today and although Boserup contained most of her examples to agricultural innovations, currently the rhetoric extends to and pressures the fields of energy innovation to find alternative sources to "unsustainable", nonrenewable resources (McNeil 2000).

3.1.6 Recent branches of alternative agriculture

3.1.6.1 The organic movement: aims, goals, and shortcomings

Warren Belasco (2007) provides critical background for understanding the organic movement of the 1960s and 1970s and shows that research on organic methods began much earlier than the mid-twentieth century. Sir Albert Howard worked in India and Great Britain and conducted scientific studies on organic farming practices in the late 1800s and early 1900s. He examined soil fertility through the presence and absence of certain insects and evaluated the quality of the crops and livestock to determine the effects. Howard felt the Industrial Revolution generated destructive forces due to the application of chemical pesticides and fertilizers and argued that the chemical inputs and continuous planting seasons prevented the regeneration of the soil's nutrients (Howard 1943). It was not until later that J. I. Rodale took Howard's theories and experimented with them on a much larger scale. Rodale bought a farm in Emmaus, PA in 1940, created the Rodale Institute and began researching organic methods as well as publishing the well-known magazine, *Organic Gardening*. The magazine had a difficult start but once it was picked up by the counterculture it grew 40 percent in 1970-1971 (Belasco 2007).

The philosophy and practices of organic methods rebelled against the ecological, economic, and social institutions of the time and then made their way into mainstream American food production and consumption. Belasco provides a specific example for why so many people adopted organic methods and decreased their fertilizer use. Between 1950 and 1959 corn farmers harvested 0.62 bushels per pound of fertilizer, but in an attempt to increase harvests (or even stabilize) farmers added seventy one more pounds of nitrogen (fertilizer) per acre between the years of 1960 – 1970. However, the harvests only produced 0.38 bushels of corn per pound of fertilizer. The decrease in corn production has supported the argument that fertilizer use will

only increase over the years, but with less yield to show for it. The advocates for organic methods also felt it would aid in rural development in that jobs on the organic farms would be created because the organic methods lacked the intense use of machinery that non organic, large-scale farmers employed (Belasco 2007).

Another claim made of organic methods is that it would bring the food economy home, which was based on the idea that chemical-free food would be more perishable and thus need to be distributed locally. The organic farms would be operating just outside every metropolis and would supply the city and countryside with food (Belasco 2007, McMichael 2003). The idea of more local transactions also attempted to address the problems of trust within producer – consumer relations and establish a face-to-face interaction wherein the consumer could access the farmer directly for any concerns such as increased prices or food safety.

The organic movement tried to achieve several different goals by keeping one's food local, i.e. less fertilizer, easier waste disposal, increased rural development, and transparency within producer – consumer relations. However, as the organic movement became larger and larger the goals of creating communities reliant on local food production were lost (DeLind 2000). There are now huge organic farms which outsource their produce not only across the nation but across the world as well.

> The irony is that as organic food and farming are increasingly integrated into national-level agricultural policy, they are increasingly threatened by the disintegration of the very principles upon which they depend. More specifically it questions the degree to which organic farming and food production can become involved in, or otherwise mimic a singularly market-dominated and profit-driven agriculture and be true to their essential nature.
>
> Organic food is maturing into the mass market (AAN 1995, Byczynski 1995, Hannon 1995, Kneen 1997, Mergentime 1995, Stearns 1995). It is becoming big business. Sales of organic products have increased more than 20 percent annually over the last six years, totaling $3.5 billion in 1996 and $4.5 billion in 1997 (AAN

> 1997, AOLNews 1998, PANNA 1995, TFN 1995). This increase is seen as a measure of public demand and industry success. Vertical integration and market expansion now absorb the attention of individual farmers, farmer cooperatives, wholesalers, processors, and retailers of organic foods, who using modern telecommunications technologies, are feverishly jockeying for improved positions within the market-place (NOMCFS 1995, Ransom, et al. 1996). [DeLind 2000:201]

For many this came as a surprise because consumers often had picturesque ideas of what organic farms looked like and how they operated. Now places, such as Whole Foods, to the well-read consumer, seem less attuned to the original ideals of organics. However, this helped to create an entry point for the strong and organized locavore movement. For participants of the locavore movement, it was obvious that organic agriculture was not going to create small, local food communities. Therefore, a separate yet similar food movement emerged which is driven by the specific practices of local production and consumption which were lost in the organic movement. The local food niche was forged within the organic movement, but it was never firmly realized; so in order to satisfy dedicated locavores a space was created for an autonomous movement, the local food movement, to develop into its own cause.

3.1.6.2 The local food movement

Our society continually increases technology and modes of communication such as internet and cellular phones in such a way that enables contact among individuals living in vastly different parts of the world. Our world is seemingly so interconnected that anyone can communicate with almost anyone, any time. We can purchase items from Pakistan with the click of a button, watch documentaries displaying the visual beauties of South America, and Skype with an old college roommate who lives three thousand miles away. However, within this world that has connected so many and so much, many still feel disconnected to people, objects, nature, and food. These

feelings of disconnectedness and alienation are not new within our culture, but rather have been stirring for a long time. Of course, Karl Marx wrote extensively on alienation and developed theories relating to labor and production (Marx 1961).

Individuals involved in various alternative food, agriculture, and lifestyle movements shared similar feelings of alienation, more specifically from the product one consumes. Many of these individuals expressed feelings of detachment, alienation, disconnectedness, and general dissatisfaction with the agri-food system. Wendell Berry, Euell Gibbons, Laurel Robertson, and E.F. Schumacher all conveyed feelings of disconnectedness with the world around them. Gibbons and Robertson saw food as a way to reconnect with the world around them and thus themselves (Gibbons 1973, Robertson, et al. 1976). Berry was not as concerned about his own life as he was with others' lives. He critiqued the values and behaviors of others and attributed the erosion of morals and responsibility to a distancing between people and the land or more specifically "a sense of place" (Berry 1965). Schumacher had criticisms as well, but more specifically of the power within leadership positions and he called for a decentralization of businesses, operations, and government (Schumacher 1974). Schumacher's primarily concern was the alarming rate at which society consumed nature's capital. He advocated for farmers to resist the influences of the Industrial Revolution and instead "interest ourselves in the perfection of production methods which are biologically sound, build up soil fertility, and produce health, beauty, and permanence" (Schumacher 1974:16).

These four activists are often quoted and cited in works that focus on explaining why alternative food systems arise. Even though Berry did not directly talk about food in the same manner as Gibbons and Robertson, his demands and pleas for a connection to the land often translated into direct connections with one's food and his ideas are used to support both

consumption and production of local foods. A theme which runs through these works is connectedness: the authors were either experiencing or witnessing what they interpreted as a disconnection with their food, their land, themselves, and the world. These same feelings have persisted to today's supporters of producing and consuming locally. Many people use food and agriculture as a viable means to resolve the issues of disconnectedness and alienation.

Localization or re-localization agricultural practices arose from a growing awareness and desire for the production, processing, transportation, and consumption of food to exist within shorter distances of one another. The concept of shorter distances refers to the physical transportation of food stuffs, but also to the relationships between producer and consumer. The distances have been so dramatically extended that individuals became concerned because they felt increasingly disconnected from their food.

There have been three main transformations that have had extreme effects on global dietary patterns over the last two hundred years. The first transformation is that of delocalization which refers to the "processes in which food varieties, production methods, and consumption patterns are dispersed through-out the world in an ever-increasing and intensifying network of socio-economic and political interdependency" Pelto and Pelto 1983: 507). Due to delocalization, many families around the globe will consume a diet which came from a great distance and often through commercial channels. The second transformation is that of improved diets in industrial nations. This is often due to the association of delocalization with greater variety of foods and larger quantities of foods. The third transformation is that of poorer dietary quality in less industrialized countries again usually resulting from the association with delocalization. This is because as more of the developing population is pulled into full commercial participation, economic and political forces have shifted focus to one or two main

cash crops, which takes away from the production of a diversity of foods and confiscates local control over distribution systems (Pelto and Pelto 1983). These profound transformations are a key aspect of the much larger picture of massive social and economic change which has affected all parts of the world.

Gretel Pelto and Pertti Pelto (1983) discussed how the processes of delocalization have stimulated many individuals and communities to reassess their food systems and to fashion practices that generate local autonomy. The specific sustainability rhetoric in regards to re-localization supplies participants with a way to talk about *why* they do what they do. However, as I have already discussed there are many different variables used in sustainability rhetoric. Rhetoric used to describe *delocalized* food system consists of an extremely dependent society possessing no immediate control over any of its resources. Rhetoric speaking to this element draws attention to the lack of management we have over resources and suggests that we should have more control and that localizing a community's food system is integral in creating a "sustainable" community because then the society has the power to operate according to its own needs and respond to its own environment (Belasco 2007, McMichael 2003, Norberg-Hodge, et al. 2003, Paxson 2013, Schumacher 1974, Shuman 1998, Wilk 2006).

Many of the scholars who argue that consuming locally produced food stuffs benefits society as a whole will often employ in their rhetoric the pioneering research conducted nearly seventy years ago by Walter Goldschmidt. The study included two farming towns in California with one town surrounded by large-scale businesses while the other was characterized by small family-operated businesses (Goldschmidt 1946). Based upon research, data collection, and analysis Goldschmidt concluded that the town with the smaller, family owned enterprises was "superior in all measures reflecting the quality of life – income, level of living, social and

physical amenities, social and religious institutions, and the degree of local control of the political process" (Goldschmidt 1978: 363). This study has become pervasive in sustainability rhetoric.

The definition of what is locally produced varies immensely depending upon whom or what developed the definition. For example, some farmers may label their grass-fed beef as local because they are selling to consumers who live less than fifty miles away, but a grocery store chain located in Pittsburgh, Pennsylvania may sell local apples as sourced from anywhere in Pennsylvania. Often individuals will fashion their own definition of what constitutes "local" such as the three women from California (Jessica Prentice[15], Dede Sampson, and Sage Van Wing) who stated that local meant within one hundred miles of their city, San Francisco (LFW 2015). In other cases, institutions will attempt to define "local" such as the U.S. Congress in the 2008 Food, Conservation, and Energy Act, "the total distance that a product can be transported and still be considered a "locally or regionally produced agricultural food product' is less than four hundred miles from its origins, or within the State in which it is produced" (Martinez, et al. 2010).

Whatever the specific means of measurement may be many accept a general definition that the goods are produced "locally" for several reasons. The most tangible reason being that producers and consumers feel disconnected and alienated from each other and they want to talk to one another and ask from where their food comes and to where it goes. Another reason results from food scares such as the E. coli outbreaks. These instances really smacked consumers with the lack of transparency and accountability when corporate farms could not explain how or where the food became tainted.

[15] Prentice is also the same woman who is credited for coining the term "locavore."

Issues surrounding economic viability also surface in issues of local production and consumption because the transactions between producers and consumers should remain on a much smaller scale, thereby enabling a community or a state rather than a corporation to retain more of the economic value (Shuman 1998). This way much more of the profits and incomes are put back into the communities from which they derive. Small farmers who sell to their neighbors and other community members take the money received for their products and then purchase other goods they need or want from those same neighbors and community members. For example, small hardware store owners can purchases fresh produce from one of their community farmers and then the farmers can take that money and buy equipment for their farm from the hardware store. The money remains within the community rather than the store owners purchasing produce from a large grocery store chain and much of the money goes to the corporation.

The ideals of re-localization have many sound, positive consequences for small communities; however the movement is not without its own criticisms much like the organic movement. One of the most prominent criticisms is one which regards the local food movement as a niche movement that only provides fresh, local food to the more affluent in society. The complaint is that the local food being offered from farmers usually through farmers' markets and CSAs is priced higher than the food in grocery stores, thereby creating a discrepancy in who can actually afford to purchase fresh, local food. This critique is also shared by the organic movement and both movements are often referred to as "yuppie" niche markets (Dahlberg 1993, DeLind 2011, Guthman 2013) .

Since these criticisms have been voiced, there have been efforts to restore equal access to fresh, local food through the incorporation of several supplemental nutritional assistance

programs (SNAP) such as the food stamp system and Women, Infant, Child approved items. SNAP benefits gain funding through the United States Department of Agriculture's Food and Nutrition Service. Although there are still problems with SNAP gaining popularity at farmers' markets because many less affluent individuals feel uncomfortable shopping at them, there are some success stories such as the Greenmarket in New York and Eastern Market in Detroit (Dahlberg 1993, DeLind 2011, Wasserman, et al. 2010).

3.2 CONCLUSIONS

As I've demonstrated the term sustainability is widely used and can be employed within many different disciplines and with different agendas. Therefore we need to understand it not as a discrete entity or set of practices, but rather as a rhetoric which offers a clearer picture of how it works. There is not one single definition that is exercised by everyone and it seems as though intellectuals, authors, and farmers select one or two aspects of the sustainability rhetoric with which to explain their own decisions and practices. In fact sustainability rhetoric is so versatile that it can be used to create feelings of liberation through stipulating limits. For example, some extreme conservatives are more worried that "sustainability" is part of a socialist agenda that will limit private property rights and erode freedoms. However, in the wake of the current recession these same groups advocate for fiscal sustainability which implies reducing federal spending, and thus debt, which in turn suggests a return to limited government and free markets (Yates 2012).

Although many people and organizations will often call upon the Brundtland Report's definition of sustainability, "meeting the needs of the present without compromising the ability

of future generations to meet their own needs", they invent and reinvent what they mean by "sustainability" on a daily basis which leads to extremely nuanced versions of sustainability definitions (WCED 1987). However, it can also lead to an understanding of the foundational thinking on which sustainability rhetoric is based. For instance, the rhetoric of sustainability as it relates to agriculture, the global agri-food system, economics, the nature of population, and re-localization is mostly rooted in expanded systems thinking which is based on the scientific idea that everything is interconnected and changing one element of the system, changes another element.

Peggy Barlett, an anthropologist working on sustainability issues, explains that expanded systems thinking is characterized by the "awareness that sees one's own circumstances in the context of wider systems of ecological, social, and economic interaction" (Barlett 2008:1079). Although this has been helpful for sustainability rhetoric, it is unilaterally rational and objective, lacking in spiritual connectedness, sense of place, and personal, sensory embodied experience (Barlett 2008). In other words, it is extremely Western. This *scientific* nature of sustainability rhetoric is a worldview construct that is based upon an underlying belief that resources are finite (Becker and Ostrom 1995, Yates 2012). Organizations and institutions therefore become involved in very specific ways not necessarily viewing the issues holistically or passionately.

Therefore, sustainability is a rhetoric that can serve personal and institutional interests. It is about power and control. Advocates for sustainability champion its ideological and moral platform of benefiting the earth and future generations, but it is still a specific worldview construction that is being encouraged, institutionalized, and implemented throughout the world. However, I don't think that everyone who adopts and imparts the sustainability program is consciously attempting to establish a colonialist-like system. Rather the insight of applying an

anthropological analysis of sustainability discourse lies not in criticizing organizations for dispersing sustainable rhetoric, but in taking a step back and recognizing that the spread and implementation of specific cultural/subcultural beliefs, values, and interpretations needs to be approached with caution as to not alienate or adversely affect those with different worldviews as well as to adopt new and diverse methods.

Particularly, as anthropologists we need to ask the questions: "sustainable for whom?" and "sustaining what?" and recognize that broad sweeping definitions and concepts of sustainability will not benefit diverse problems in specific places (Stone 2003). For example, for decades policy planners have criticized pastoral lifestyles as unsustainable based on rhetoric of "irrational actors" and thus have implemented changes to establish a less mobile means of production, private property laws, and agricultural practices. However, the research conducted by Elliot Fratkin and Robin Mearns on two pastoralist populations, East African Maasai and pastoralists in Mongolia, illustrates the idea that unsustainable, pastoral livelihoods is a mistaken assumption when applied to all pastoralists, everywhere.

Fratkin and Mearns (2003) argue that with the changes accompanying the lives of the pastoralist groups in Mongolia such as population growth, loss of pastureland to private farms, and increased commoditization, the sustainable solution is *not* completely shifting to an agricultural mode of production, but rather protecting mobilization and local grazing management that is characteristic of pastoral groups (Fratkin and Mearns 2003). The integration of "agro-pastoral" strategies by pastoralists is not a new phenomenon fueled by modern pressures, but rather has been occurring for hundreds of years (Hanks 2010). However, contrary to the situation for the pastoralists in Mongolia, for the East African Maasai sustainability means to complement their pastoral lifestyle with semi-permanent agricultural production. These two

examples are helpful in that they demonstrate the important role socio-economic and historical nuances play in understanding the differentiation "sustainability" will have in different places as well as who and what is being sustained.

The rhetoric employed when discussing "sustainability" often draws upon an expanded systems thinking, but even those elements seem to be prioritized depending on the particular sector. For example, within economics the rhetoric used to talk about becoming "sustainable" can either be concerned with economic growth or with revolutionizing our conception of the world. Within agriculture Monsanto, a mega-corporate agribusiness, employs rhetoric that espouses their nature of sustainability because they "produce more food using fewer natural resources (Monsanto 2015). Yet within this same sector of agriculture, we have small farmers chastising Monsanto for their unsustainable use of chemicals. These small farmers are utilizing a different kind of rhetoric to capture what they mean by sustainable – a farm without chemical fertilizers and pesticides. The rhetoric can be changed depending on the way individuals interpret their own beliefs and practices and how they engage with the world.

Most of the time sustainability rhetoric is used to further one's own gain either morally or financially, but too often the rhetoric is also used to pave the way for national and international policies such as family planning in Haiti or nutrition in Colombia. In these cases the rhetoric used can be particularly powerful and serve political agendas. Anthropological analysis of sustainability rhetoric in different sectors can be especially insightful as we come to learn the many ways it is used and how we might better understand what goal is actually trying to be achieved and by what means.

4.0 THE SPECTRUM OF SUSTAINABLITY ON SMALL FARMS

To better understand the plurality of meanings attached to sustainability within my study I wanted to include farmers who identified as both sustainable farmers and conventional farmers in order to learn of any correlations or variations among their ideas of sustainability. I initially organized the farmers into two categories: sustainable and conventional based on what I had understood sustainable to mean from the mainstream literature regarding sustainable agriculture as well as descriptions given by local extension agents and agricultural professors (Allen 2004, Belasco 2007, Berry 1965, Beus and Dunlap 1991, Lyson and Guptill 2004).

It was not long into my fieldwork that I realized two categories of essentially "sustainable" farmer and "unsustainable" farmer would not suffice. In fact, many of the farmers are frustrated with the label and criticize the inability in using the term to account for differences in philosophy, method, and context. Therefore, after numerous conversations with farmers, the resulting categories were 1) "sustainable", 2) "conventional", or along a spectrum as either 3) "working toward sustainability" or 4) "leaning toward conventional". However, even these descriptions came with caveats, exceptions, and overall feelings of frustration and uncertainty. A detailed explanation of how these categories emerged is provided in chapter 2. In this section, I begin by providing a more specific picture of the categories of "sustainable"; "working toward sustainability"; "conventional"; and "leaning toward conventional" by providing an ethnographic profile of a farm family for each category.

4.1 THE FARMERS

4.1.1 A "sustainable" farm family

Lucy and Frank own and operate a small farm in north-central West Virginia and identify themselves as "sustainable farmers running a sustainable farm". The farming operation consists of cows, goats, chickens (layers and broilers), and several different varieties of vegetables. Although they grow many different types of annual vegetables, perennials, such as asparagus, garlic, and strawberries are favored because Lucy feels they are less work and she likes the idea of something coming back year after year. The garden is mostly for personal consumption, but they do have plans to someday sell their produce as well. Both Lucy and Frank are strongly against the use of chemicals on their produce, unless they are certified organic and even then Lucy prefers to make her own herbal remedies for fungus or pest problems. They are also very committed to planting heirloom varieties and are strongly against genetic modification for several different reasons. For example, one bitterly cold afternoon while Lucy and I were making a pot of her famous chicken stew, she explained two of the reasons she and Frank do not use genetically modified organisms (GMOs): 1) the reports of GMOS impairing monarch butterfly larvae as well as other non-targeted species and, 2) the issues with intellectual property laws.

Lucy and Frank have three children who are all younger than eighteen years of age and are homeschooled. The children often help Lucy in the garden by pulling weeds, planting, watering, and laying mulch and they contribute a considerable amount to farm life as a whole. For example, they help with daily chores in the house and on the farm such as cleaning, feeding, birthing, weeding, watering, harvesting, and watching over each other as well. The youngest of

the children is a baby who is still in diapers, cloth diapers, and the oldest child often changes her, cleans the diapers, and hangs them to dry. I've heard Lucy remark several times that she doesn't know how she "managed to raise kids before without a ten year old to help her".

Lucy is absolutely against the use of black plastics or biodegradables to help with weed control and so she and the children spend a great deal of time tending to the garden. Frank spends most of his time in the barn and fields because they practice an intense version of rotational grazing which incorporates the chickens and cows. Rotational grazing is a method touted for its sustainability characteristics as it provides for healthy animals and soil. It is also extremely labor-intensive because Frank moves the chicken coops which are built on wheels or sliding rails multiple times a week, at the very least. I discuss rotational grazing at length in chapter 5. The rotational grazing aspect of their farm is a strong source of pride for them and often arises in discussions of sustainability.

Lucy and Frank do not vaccinate their animals, in fact none of their children have been vaccinated either. Lucy knew that my research required me to visit numerous farms with different farming philosophies and since her animals have not been vaccinated she politely gave me two choices when I came to their farm: 1) wash my boots before I came to visit or, 2) wear plastic coverings over my boots to prevent any biological contamination from other farms. In addition to declining the use of vaccines, Lucy prefers not to use antibiotics either. If an animal becomes sick, she and Frank would first try different homemade remedies using herbs and oils to help fight the infection.

The pasture and hay fields are part of a system of rotational planting between grasses, such as Timothy and cover crops, such as clover or oats. During the winter months Frank fences off an area around the barn for the cows so that the manure from the cows is concentrated in a

small space in and around the barn. This makes it easier to collect the manure so that he can spread it on the fields for fertilizer. According to Lucy and Frank, using mulch for their gardens and manure for their fields help to make their farm sustainable by increasing their on-farm inputs as well as decreasing their need for off-farm inputs such as sprays whether they are organic or homemade.

Lucy, Frank, and their children consume everything that is grown or raised on their farm; even one of the goats is a milk goat and the children share the responsibility for milking her, but the entire family drinks the milk. Lucy explained to me that this growing much of their food is "an income" for them because then they are not spending as money on food. Most of their income comes from selling the chicken eggs at farmers markets as well as to restaurants. They sell their cows and goats by specific cuts, half cow/goat, and whole cow/goat at farmers markets and by word of mouth. When Lucy and Frank first began farming, they made a five year business plan and set a goal that by the end of those five years their farm would be the sole support for their family. In the beginning years Lucy worked as a substitute teacher to help bolster the family's income, although she still does this occasionally they do not feel it is as financially necessary as they did in the first couple years. When Frank and Lucy did their taxes, they explained that it helped them to realize how much their farm "makes" that does not show up in direct profit. For example, they used a lot of their farm products to barter with friends for other products that they needed, but did not grow or raise on their farm.

The farm was originally Lucy's grandparents' farm and had not been worked in many years. Lucy and Frank made arrangements with her family so that she and Frank could move onto the land and "bring the farm back to life". There are two houses on the farm; an old two story farmhouse which needs a lot of work and a very small log cabin. The plan was to live in

the log cabin while they did much of the work themselves to renovate the farmhouse. After several years of tough, grueling work they finally moved their family into the farmhouse to raise the fourth generation of Lucy's family under its roof.

4.1.2 A "working toward sustainability" farm family

Tucked into the foothills of the Appalachian Mountains, a beautiful small farm which is owned and operated by Wendy and Cliff provides them with the means to live the life they want. When they moved to the region and bought the land, they lived in a school bus while they built their home because there was not a house on the property. Since then, they have added two large storage buildings, a greenhouse, a high tunnel as well as cabin for some of their farm laborers to live in, all of which they built themselves with a great deal of help from neighbors and friends. Wendy and Cliff did not always want to be farmers; rather they were led into farming by their desire to live a sustainable lifestyle. Other options had been discussed, but after spending time on Cliff's family farm they decided to try farming and if by a certain amount of time it did not work[16] they would try something else.

For the first several years they worked on the farm from March until November and then took off farm jobs from December until February. During the final year of my field research they did not take any off farm work and instead put the time into their own farm, which they felt would help to eventually balance them out financially. Both of them felt very confident that the off farm work would no longer be necessary.

[16] This referred to more reasons than financial reasons such as emotion, physical, and mental reasons.

Wendy and Cliff have two children, who are still too young to help very much on the farm, but they are homeschooled and daily farm activities often serve as a classroom for the children to learn. The farm is also home to various farm laborers during the growing and harvesting seasons. Wendy and Cliff contract a farm manager and a few other young adults to help with farm work, but it is rare when the same person returns the following year which makes it difficult for Wendy because she then needs to train each new person every year. The manager position is more of a manager-in-training internship because Wendy and Cliff are the main operators of the farm and make all of the farm decisions, but it is an excellent way for someone to learn the day-to-day responsibilities, decisions, risks, and challenges of operating a farm. Although, the other laborers are given fewer management responsibilities they also learn a great deal about farming by carrying out the strenuous tasks of farm life. All the employees are given a monthly stipend and generous portions of farm harvests, while two and sometimes three laborers are also permitted to live in the cabin during their stay.

The farm operation consists almost entirely of vegetables, which they sell at farmers markets and through community supported agriculture (CSA) memberships. A few pasture raised cows have been recently added to their farm, but Wendy and Cliff only finish the cows, which means they purchase the cows from another farmer, let the cows graze on their pastures during the summer months, and then sell the cows in the fall, marketing them as grass-finished cows. They do practice a variation of intensive rotational grazing which includes moving the cows to different fenced off pastures a couple of times a week. However, they are not as zealous about it as some other farmers are and they do not incorporate other farm animals such as chickens or pigs into the grazing system. This has more to do with their operation being based

more on vegetables, rather than any feeling or philosophy concerning rotational grazing or livestock.

Similar to Lucy and Frank, Wendy and Cliff do not use chemicals unless the chemicals are organic; nor do they vaccinate their cows (or children). However, they are more comfortable with using antibiotics and do not readily seek alternative herbal remedies. Wendy absolutely hates the use of black plastic for weed control, although Cliff is more open to it and would probably use it if Wendy didn't feel so strongly. They also use mulch in their vegetable fields, but since they only finish the cows and do not have a barn in which to winter them they purchase off farm fertilizers.

4.1.3 A "conventional" farm family

Chris is a third generation farmer working the same farm his grandfather started. In fact, the main operators of the farm are Chris, his father (Saul), and his grandfather (Henry) and all three men are married. Although the wives do not regularly help with farm work, they do contribute largely to farm life because they manage the households which give Chris, Saul, and Henry much more time to devote to the farming operations. When I visited the farm and remained outside not in view of the house, I rarely saw any of the wives. However, I do know that they were part of any decision-making processes and they participated actively whether issues concerned the household or the farm.

Chris was raised on his family's farm in a house less than two hundred feet from his grandfather's farmhouse. While attending college, he decided he wanted to work with his father and grandfather on the family farm. After graduation Chris moved back to his home town where he and his wife moved into their house only a few miles away from both of their families.

Although Chris had always helped with the farm work, he had to learn an entirely different aspect of farming: the business side. He enjoyed this thoroughly and became more involved with helping to market his family's products. He created a Facebook page which helped to widen their customer base, although word of mouth is still the most successful tool used. Chris has plans to remain working the farm and take on more responsibility, especially as his grandfather settles more into retirement. While the farm has helped to support all three families, it is not the sole means of their incomes. Chris's wife works off farm as does his grandmother, while his father works the farm full time in addition to holding a second job as a school bus driver.

Chris, Saul, and Henry grow potatoes, hay, grains, and also raise cattle. They cultivate such a large number of potatoes that they are not grown in gardens, but rather in acres of fields. The farmers sell the potatoes to individuals by a minimum of five pound packages, but they also sell potato starters to private agricultural organizations. The hay and grains are fed to the cattle, although some of the grains are sold to other farmers as well as to some companies. A local cattle broker buys most of the cattle and then sells them to feedlots in the Midwest. Remaining cattle are kept for breeding next year's stock and for the families' own consumption, while others are sold fully processed to individuals and families by the half cow or the whole cow.

Chemicals, such as pesticides and herbicides are used on the farm mostly on the potatoes and grains to prevent pest damage, but also on invasive plants in the hayfields such as thistles. Chris, Saul, and Henry do vaccinate their cattle against diseases known to be present in the region and they do use antibiotics when an animal is suffering from an infection.

The cattle are moved into different pastures a couple of times a season so that they have access to fresh grass, but they are not incorporated into any type of intensive rotational grazing. The manure is captured and spread on the fields as an on-farm input and crops are rotated in

different fields to prevent depleting the soil of its nutrients. Cover cropping with clover, wheat berry, brassica and oats is also used to help replenish the soil and protect it against erosion.

4.1.4 A "leaning toward conventional" farm family

Two brothers, Travis and Tim, own and operate the same farm that their mother and father started in northern West Virginia. Their parents have since passed away, but Travis lives with his wife in their old farmhouse. Tim is single and resides in a house that he built, which is also on the farm. Travis's children, Heather, Mackenzie, and Steven, have families of their own, but they have all stayed in the area. Heather and Mackenzie work on the farm and Heather lives with her family in a newly constructed home near the old farmhouse, while Mackenzie lives only a few miles away.

The combined families provide the farm with almost all of the labor except for only one or two extra laborers during the potato harvest season. The main products of the farm are potatoes, cattle, and grains. When Travis and Tim's father originally started the farm it was a viable dairy farm and one of the largest in the region. The entire infrastructure is still there and although it is no longer a dairy operation, the farmers have made use of all of the buildings, including the milking parlor and silos.

Even with the existing infrastructure, they still needed to construct new buildings in order to store all of the equipment because of the large number of specialized tractors, attachments, and tools. Different grains require different machines for planting and harvesting and Travis and Tim grow four different kinds of grains: wheat, oats, barley, and rye. The potatoes require separate equipment as do the large vegetable gardens. Purchasing and maintaining farm equipment is incredibly expensive, fortunately Tim is a very talented mechanic and he repairs

most of their broken equipment and tools. He is also extremely resourceful and inventive and has constructed or rebuilt several specialized tools as well as a tractor in order to meet the specific needs of their farm. Travis and Tim have both told me that knowing the mechanics of their equipment and being able to make their own repairs have been tremendous financial assets for them.

The cattle on the farm provide for almost all of the fertilizers the farmers use on their fields and gardens except for a very small percentage of chemical fertilizers (less than 5 percent) that are purchased in order to cover all of the productive land. In addition, Travis and Tim rotate all of the potatoes and grains so that one crop does not deplete the soil. They do use pesticides and herbicides on the grains, but they use only a little on the vegetable gardens. Instead, mulch is heavily incorporated in the gardens to help with weed control, pests, and to restore nutrients into the soil. Travis and Tim do vaccinate their cattle for diseases that are specific to the region and they use antibiotics on the animals when they are sick.

A substantial amount of the potatoes are sold to individuals and families who drive to the farm to pick up their purchases, however Heather's husband does deliver some to a central location approximately one hundred miles to the west where customers come to pick up their orders. Cattle are divided four ways: 1) most of them are sold to a cattle broker who then sells them to a feed lot, 2) others are sold to local customers, 3) some are kept for breed stock, and 4) a couple of cows are butchered for Travis and his family and for Tim. The vegetable gardens are more than enough to feed each family as well as to sell at the local farmers' market.

Although they work full time on the farm, Travis and Tim supplement their income with off-farm work. Travis's wife takes care of the household and teaches school. Travis's daughters work full time on the farm and their husbands have off farm jobs with the exception of Heather's

husband who also works full time on the farm. The off farm jobs are not the passion of each person, but are necessary in order to provide insurance and a desired lifestyle.

4.2 THE CONSEQUENCES OF A DIVISION BETWEEN SUSTAINABLE AND CONVENTIONAL FARMING

Sustainability-aligned farmers told me that they want their farm to be "sustainable" and that often the ideals of conservation guide their decisions, but there are many times when resources limit their choices and lock them into applying less sustainable practices or methods or force them to choose even if they are not sure which practice is better or worse in different contexts. When discussing sustainability, one sustainability-aligned farmer told me:

> I mean for us there's a deep pronged approach to discovering sustainability on this farm. So when we left the city we were just thinking sustainability with a capital "S" and we want to be sustainable and we were also very hooked on the idea of self-sufficient at that time, but we've given that up a long time ago because a true community relies on each other, you know, so the idea of self-sufficient is just crazy especially in today's world. Maybe in colonial times when people were going out and living on the prairie you had to be a lot more self-sufficient although you still went to town for certain things so, so for us we've kind of checked certain things off the list as we've come along. So we knew that we definitely wanted to be sustainable and good to the earth in our practices so there's many things that we can do here on the farm that we try to do sustainably, you know, and so no farm is perfect and there are definitely things that we do that are not sustainable like every time you put down row cover and it is taken up by the wind and you have to throw it away you feel like wow, that is not sustainable. I don't like that, that actually just happened, but that's also kind of a reality of farming and we're trading row cover instead of using a lot of the sprays which is better for the earth. But which is better for the earth in the long run though I'm not really sure…

This same type of conversation occurred many times with farmers when we discussed not just sustainability, but issues regarding any kind of decision making. Not every farmer feels the same way about row covers or sprays, so the points of collision and consideration may be different, but they were always present. The nature of these conversations with farmers fostered the recognition that "sustainability" is not a black and white, concrete entity in which farmers are either sustainable or unsustainable. Instead, I argue that sustainability lies more within a spectrum of philosophies and practices. It is critical to include philosophy and practices when understanding farmers' categorizations of the four groupings of "sustainable," "conventional," "working toward sustainability," and "leaning toward conventional" because it is from the farming philosophy or ideologies and practices that these categories are created and further analyses are made regarding the nature of sustainability within a small farm context.

During visits to the farms and conversations with the farmers, I would ask farmers to tell me about some of the practices they employ that help them with farming challenges. Regardless of how the farmers identified along the sustainable – conventional spectrum, many of the same practices emerged and I saw them implemented on the farms. For instance, some of the most common practices included, mulching, planting cover crops, rotating crops, using manure fertilizers, and the minimal application of chemical inputs. Therefore, the small farmers in my study whether they identify as "sustainable," "working toward sustainability," "conventional," or "leaning toward conventional" are *using many of the same practices*.

At this level of analysis sustainability seems to be more about the actual agricultural practices farmers implement on their farms in order to meet specific challenges. This is true speaking from a strictly practical sense in that certain practices are more sustainable than others and are recognized as such by farmers identifying as sustainable. This realization opens the

sustainability discourse to now include farmers that do not necessarily advocate their sustainable practices or alignments. In fact, it sheds tremendous light on the division that has been created between conventional and sustainable agricultural operations.

Many works regarding sustainability explain its *modus operandi* by means of listing particular objectives and highlighting the tripartite goal of environmental sustainability, economic sustainability, and social sustainability (Allen 2004, Dahlberg 1991, Sumner 2007, WCED 1987)[17]. In relation to agricultural sustainability specifically, it is often couched in terms of how much it is *not* like conventional agriculture, which has become part of the sustainability rhetoric. Conventional agricultural through its farming methods and practices is criticized for damaging the ecosystem, polluting the air and waterways, decreasing biodiversity, depleting natural resources, draining a sense of community, lacking in quality products, and producing strains of resistant insects, bacteria, and fungi. Advocates of sustainable agriculture on the other hand, not only claim that sustainable practices do not have any part of those destructive features, but that sustainable agriculture will reverse the negative effects of conventional agriculture (Allen 2004, Beus and Dunlap 1991, Dahlberg 1991, Lyson 2000, Lyson and Guptill 2004).

[17] The WCED is the World Commission on Environment and Development. It is a commission within the United Nations which compiled the report, Our Common Future otherwise known as The Brundtland Report. The Brundtland Report's definition of sustainability as "meeting the needs of the present while also meeting the needs of the future" has become widely used in all disciplines, organizations, government institutions, and websites.

Table 4: Characteristics of Conventional and Alternative Agriculture[18]

Conventional Agriculture	Alternative Agriculture
Time Frame: Two to five –year planning horizon used by policy makers	Future decades and centuries
Policy Approach: (none listed)	Policy changes focus on reorganization within institutions, e.g., reform of agricultural subsidies and tax laws (Policy changes focused on basic reform, e.g., land tenure and terms of trade)
Approach to Science and Technology: Subject of investigation is agronomic factors, excluding social or structural issues Methods are reductionist and based on single disciplines	Faith that current scientific and technological approaches can produce sustainable outcomes (Science and technology can have a positive role only if significantly restructured within a broadened ethical and social framework) Interdisciplinary, systems-based, and localized approaches (Need to examine fundamental discontinuities between social and legal systems and natural systems) Requires fundamental restructuring of current specialization of top-down research, education, and extension services
Goals of Sustainability: Maintaining productivity while using environmentally damaging inputs	Better integration of individuals, communities, and nature through socially just and regenerative system
Measures of Success: Narrow economic of productivity criteria	System health criteria include economics, ecology, ethics, and equity Health of agriculture depends on divers, healthy rural landscapes and communities, which in turn depend on healthy agriculture
Visions of the Future: Growth and prosperity of urban society depends on application of science and technology to increase human domination of nature	Recognition of humankind's dependence on natural systems Need for smaller-scale social and technological systems built around healthy local communities and agroecosystems

[18] Source: Allen 2004.

My research shows that the small farmers who identify along the conventionally-aligned spectrum do indeed utilize many of the same practices as sustainable farmers; practices that are classified as sustainable by sustainable farmers, researchers, and advocates. However, due to the categorizations of "sustainable" agriculture and "conventional" agriculture, farms that do not advocate or advertise their use of sustainable practices are often simply labeled as "conventional farms." The misconception that all conventional farms are unsustainable, a distinction mistakenly created *vis-á-vis* sustainability rhetoric has fashioned at least two primary problems. The first problem is that of mislabeling and therefore misrepresenting the nature of sustainable and conventional methods and practices. Advocates and researches have, at times unknowingly, constructed such a rupture between conventional and sustainable agricultural practices that the two categories seem to inhabit their own specific entity in that a farm could be placed into a nice, neat label as either sustainable or conventional. With the recognition that sustainability is not a clear-cut, concrete reality we can better understand the fluidity of farming operations and begin to understand that both types of practices that derive from the labels of conventional and sustainable will often exist on the same farm.

Many of the sustainability-aligned farmers in my study are aware of the fluidity of farming practices and acknowledge that they still use many conventional practices either by choice, lack of alternatives, or a negotiation process. Sustainability-aligned farmers talked to me about certain circumstances that require them to negotiate which practices they employ. I refer to the process as trade-offs and they are a part of everyday decision-making and can occur when:

1.) Farmers attempt to make a decision between two or more practices, but they are unsure of the effects either in the short term or long term; or
2.) Farmers utilize an agricultural practice they feel is unsustainable but negotiate or "trade" this practice alongside another practice they feel is sustainable.

Trade-offs are prominent in the decision-making process and often help to make the decision "easier" because farmers will use them when they are faced with a difficult problem, are uncertain of an outcome, or wary of their own perspectives. One sustainability-aligned farmer explained this process to me:

> A lot of your sustainable farmers put down a biodegradable cloth to help with weeds, but it's so expensive. I do use a biodegradable plastic; a lot of sustainable farmers use this. The plastic is not petroleum based and it biodegrades into the soil so you don't have to throw it away. But there are still a lot of people who don't like it because it is a plastic, but I feel that I do so many other things that are more sustainable like the no tilling and no spraying that I can use the plastic to help me, then I don't have to hire more people to weed or take the time to weed myself[19].

The above quote demonstrates how this farmer is negotiating the use of putting down plastic to help fight weeds. He explained to me that there are feelings of discomfort because he is uncertain of the effects of the plastic and knows that other sustainable farmers are vehemently against the use of it, petroleum based or biodegradable and so he can "trade" on the other sustainable practices that are employed on the farm such as the no tilling and no spraying. Many farmers go through this same process often with these exact practices, but many other practices are involved as well. For example, many sustainability-aligned farmers lament about how much gasoline their machines guzzle in order to get the work done, but they feel like they do not have any other viable options. Other farmers negotiate their equipment's' use of fossil fuels with the benefit of having more time to devote to another project or to read a book they have been promising to read to their children. Therefore, assigning a label to farms as simply conventional

[19] This conversation is quoted directly from a conversation with a farmer, but I have eliminated some of the words or phrasing such as "um" and "you know" that occur frequently within a spoken conversation so that it can be read more clearly. I have done this with all of the quotes in the dissertation.

or sustainable buries the intricacies of these everyday decision-making processes on the farm as well as the issues of moral reasoning that each farmer must negotiate. One sustainability-aligned farmer talked to me specifically about the complexity of decision-making:

> The difficulty is how one reaches toward environmental sustainability because the problems one faces as a person and as a business person are really complex in the sense of small scale farming because it is essentially inefficient. We get less out of doing a lot of work and that's why other people have bigger farmers, because you drive a bigger tractor and you can do more with just one pass than I would do with say, five passes and so each pass that I'm taking is less efficient, that means that I'm burning more fuel when I'm doing that and the same can be said with doing deliveries. I mean I'm driving my vehicle across town to make a small delivery whereas I could still make that same trip and deliver ten times that much stuff, twenty times that much stuff and in terms of environmental sustainability that means that's a huge cost. But you know, personally for my farm business, I think there are a lot of choices that I have made and I make that help that. I mean one is that, I mean at the basis of sustainable agriculture is a maintenance of the soil and one of the biggest things is maintaining organic matter and that's a ton of carbon, I mean not literally a ton, more than a ton, uh but, laughs, a great deal of carbon is sequestered in organic matter, it's huge, it's astronomical, the amount that is held in there so even when you begin to think about that you're making a pretty big difference in things and so if you can practice in that way you get toward a greater environmental sustainability.

The second problem that arises with such definitive categories as "conventional" or "sustainable" is that the stark labeling connotes that within the categorical labels there exists categorical differences in farming operations on small farms. People are misled and therefore, believe that if a farm is conventional then it is unsustainable, damaging the environment, and operating under a rubric of greed. The most common assumptions about conventional farmers are that they:

1.) Use chemical fertilizers because production and yield are the driving forces of operations
2.) Spray the vegetables and grains with chemical insecticides and fungicides because they do not want to learn alternative means to handle such challenges

3.) Inject their livestock with vaccines, antibiotics, and other chemical medicines because they do want to take the time to see what ails a specific animal.

These assumptions are widespread and misguided. The conventionally-aligned small farmers in my study do not give these reasons for why they may spray or provide medicines for their animals. Instead, it is a much more complicated issue and involves many elements such as salvaging an entire bean crop from the Mexican bean beetle, making enough profit to send a son or daughter to college, and believing in the medical science that vaccines are recommended in certain cases and are safe.

Unfortunately the assumptions that come along with the labels are usually not correct and they mask the complexity of the struggles individual farmers confront, adjust to, and mediate. In addition, they also camouflage the actual practices small farmers are performing under the veil of misconception and ill-informed assumptions. Small farmers, regardless of grouping or labeling are using many of the same practices and therefore they should be able to break down the imposed barriers and collaborate with one another, thereby expanding their resource pool and encouraging new thought. It is my hope that this research will help to accomplish this.

In several instances conventionally-aligned and sustainability-aligned farms were right next door to one another and the families were neighbors, but felt that they did not have much in common when it came to farming. When I asked one sustainability-aligned farmer about experiences with neighbors, I was told:

> I would say we are all cordial you know if they would come to me for help they would get it and I think a lot of them want to. Then in an emergency situation they would help me. When Sandy hit if it wasn't for the farmers we never would've gotten out here… I would say yeah 80 percent of them have no idea of the scale of this farm and what we do. I guess we keep it hidden in a way, but in other ways it's in the limelight. But I think everybody is so busy with their lives. They call themselves farmers and yeah they are, but in the spring they take the

> cows out and open up the gate and then don't go back and find them again until the fall[20], you know.

Another conventionally-aligned farmer described their relationship with their neighbors:

> The neighbors are just people who live next to us… The guy on the side of us we speak but it's not like hey I've got this going-on on the farm could you maybe give me a hand when you're doing whatever and I'll come over and help you on your farm, you know the only time anything ever happens is during a crisis situation.

This is the case for several of the farmers. They just feel that they do not farm "in the same way" and therefore have nothing to share or learn from one another. If the assumptions from the labeling could be broken down and farmers learned that conventionally-aligned small farmers are doing many of the same things as sustainability-aligned farmers, then more collaboration would occur. In addition once a dialogue is established they can then begin to solve similar problems together and learn new and different ways of meeting farming challenges in ways each farmer respects.

Recognizing that many of the same practices are utilized by the different groupings of farmers helps to shed light on encouraging more collaboration. It is also then begs the question as to why there is such division in the first place. Upon further analysis of my research I have concluded that the actual practices are only half of it because there is an element present that demonstrates that to many farmers sustainability is more than the methods one employs, which has to do with the reasons farmers utilize certain practices and methods. In fact, there are actually two types of reasons that need to be recognized in order to fully understand the

[20] This farmers is talking about farmers who do not practice intensive rotational grazing and the description which he uses, "in the spring they take the cows out… and don't find them again until the fall" is meant as a negative reflection against this type of farming.

dimensionality of sustainability at work. The next section dissects sustainability ideology and sustainable practices and thus reveals the emotionally charged differences between the two and reinforces why recognition of the separation is so important to farmers.

4.3 SUSTAINABILITY IDEOLOGY AND SUSTAINBLE PRACTICES: HOW AND WHY ARE THEY DIFFERENT?

By immersing myself into the lives of farmers on and off the farm, I had the opportunity to have in-depth conversations with them about many different topics and many of the topics were related to issues of sustainability. Once I began realizing that the small farmers, regardless of how they identified, were utilizing many of the same practices I began to ask questions regarding these specific practices and why the farmers employed them. I have concluded that farmers utilize "sustainable practices," but identify with a "sustainability ideology". Sustainable practices are farming practices which 1) farmers might advocate as sustainable, 2) are simply practices that "make sense", or 3) have been learned from parents and grandparents. The three most common sustainable practices were mulching, using on-farm inputs such as manure, and cover cropping. However, there is still a perceived difference among farmers who utilize these methods, which I argue results from a "sustainability ideology" encompassing highly charged, emotional designations of identity.

The ideology of sustainability is a very powerful force in many people's lives and it gives them a way to structure their life and make decisions based on and guided by what is or is not "sustainable". Sustainability ideology can govern where people shop, which foods they consume, what kinds of cars they drive, which brands to purchase, and even where they live.

However, too often sustainability subscribers believe that sustainability can be defined into a culmination of an end-product and often determine sustainability based upon one or two factors. For example, there are many who believe that sustainability can be marked by a car that is either sustainable or not sustainable by simply considering its fossil fuel usage. There is not much or any regard paid to other processes involved in car manufacturing such as, the means of exporting and importing and the necessity of owning a car at all. The proliferation of sustainability ideology as it has been disseminated and even commercialized through sustainability rhetoric has exacerbated the ill-conceived assumption that sustainability is a straight-forward concept.

It is within the reasons the farmers have for why they implement certain practices that the heart of the distinction between sustainability ideology and sustainable practices emerged because upon even closer examination it became obvious that there are actually two types of reasons nested within the selection of certain practices. The first type of reasons for why farmers choose certain practices is the same for many small farmers. For example, I had asked a sustainability-aligned farmer what kinds of practices she uses to improve the land and the soil and she responded saying that:

> Cover crops, grass clippings, leaves, and straw are really, really big. Trying not to leave your soil bare for any length of time even if it's not going to be producing a crop, get in a cover crop or get mulch on it or something. The cover crops and mulches will help to keep the nutrients in the soil by helping with erosion and it will also add some nutrients back into the soil.

Figure 11: Rotating compost bins. Photo Credit: Amanda Zickefoose.

Another sustainability-aligned husband and wife farming team also explained one of their methods for helping to improve the soil:

> There are different ideas as to how best to improve your soil and if you have cows using their manure for fertilizer is a great way to do this. You can just let your cows out during the winter to wander the fields and let them spread the manure wherever they go, but this isn't as good a method because the manure doesn't help with the soil and nutrients as well this way because it's exposed to all the elements like rain, snow, and sun. We want to over-winter the cows in the barn this year and just keep a smaller area fenced off outside the barn so they can go outside if they want, but this way it keeps the manure in a more concentrated area and easier to collect it when winter is over. We can take it out then probably by shovels and wheelbarrow since we don't have the tractor fixed yet, so we'll take it out and pile it and then cover it and let it sit and decompose. Then when it's done

> we can take it out and spread it on the fields. It's good stuff for the soil and makes good hay.

The first type of reasons for why farmers utilize these practices of cover cropping, mulching, and spreading manure is straightforward enough – to improve the soil quality of their farmland. They have told me these practices increase soil fertility, reduce erosion, and replenish the soil with additional nutrients. It is through these acts of amending the soil that the improvement of pastures, hayfields, and vegetable plots will result. As one conventionally-aligned farmer put it:

> This is our bread and butter. That ground out there like I said is our bread and butter so we take care of it the best we can. Just as any business you try to get the most profit out of it or the most production with as little overhead as you can. So we use cow manure instead of chemical fertilizers which is more environmentally safe which is cheaper on our pocketbooks which actually builds the topsoil up better. Just something simple as that. Some lady asked us the other day, is a farmer one of the best environmentally friendly stewards you'll ever find. I said yes because that's our bread and butter. We're not going to destroy it, it would be like cutting your throat, you know what I mean, or like firing yourself from your job that's just the way it is.

Figure 12: Piles of manure covered with hay in Monongalia County. Photo Credit: Amanda Zickefoose.

The practices of cover cropping, mulching, and spreading manure are used by all of the small farmers in my study regardless of "sustainable" or "conventional" alignments and they have all told me that it helps the soil and is not harmful to the environment. These are also three methods that are highly recommended by the farmers that identify sustainability-aligned farmers. If new farmers ask any of the sustainability-aligned farmers and most of the conventionally-aligned farmers how they can make their farm more sustainable, one or all three of these methods would surely be advised. This demonstrates that there are a set of practices that are conceptualized as "sustainable" by the different groupings of farmers and all of them, with the

exception of one, would recognize those practices as such. This understanding helps to disintegrate the notion that any "conventional" small farm operates solely on a basis of profitability without regard for the environment and emphasizes the need for these small farmers to be recognized for their contribution toward sustainable practices. Many of the conventionally-aligned farmers told me that there parents or grandparents were utilizing these practices long before they became "cool." Countless farmers around the world utilize the same practices and have been for a long time such as farmers in Ecuador who practice extensive crop rotation methods (DeWalt and Uquillas 1989).

When talking with the different farmers about their sustainable practices, they gave the same initial reasons for why they use these specific practices, i.e. improving soil fertility, reducing soil erosion, and replenishing the soil with nutrients, rather than other practices. These are the first type of reasons, but the second type of reasons really captures the designation for a separation between practices and ideology. For example, sustainability-aligned farmers who use manure fertilizer rather than chemical fertilizers explain that the manure is better for the soil and they want to use practices that reflect their overall goals of living a more sustainable lifestyle. Farmers who subscribe to this ideology organize all or part of their lives around it and it serves as an identity for them in that it gives them a sense of who they are as farmers, but also as people. It is an ideological construct which helps to shape how they understand and see the world as well as their place within that world. Sustainability ideology shapes how the farmers perceive themselves and others and has created a rubric for identity. The farmers who subscribe to a sustainability ideology talk about the way they farm as being part of a passionate movement and a restructuring of the social order. For them it is not just about incorporating sustainable agricultural practices, but rather it is about a fundamental worldview which guides their reasons

for using particular practices. These practices then become physical manifestations of the farmers' sentiments toward the environment, society, food systems, and agricultural regulation. The farmers construct value from their labor and from the specific production methods they have chosen to produce a specific food.

Table 5: Sustainable Practices and Sustainability Ideology

Sustainable Practices	These are practices that have been acknowledged as sustainable by identified sustainability-aligned farmers, researchers, and advocates. The three most common were mulching, on-farm inputs, and cover cropping, which were used by all the farmers regardless of alignment.
Sustainability Ideology	This category represents a different type of reasons for why certain practices are implemented and refers to a collective reasoning of sustainability. It comprises an ideological construct which governs agricultural practices and the underlying reasons for choosing specific practices.

4.4 IDENTITY AND EMOTIONALLY CHARGED DESIGNATIONS OF SUSTAINABILITY

The degree to which a farmer denounces "unsustainable" practices plays a part in how sustainability-aligned farmers decide who is most like them and therefore who they can learn from and with whom they can collaborate. In addition to this element there is another "bigger picture" element at play. It is not simply *how* farmers talk about specific practices, whether they use them, and why or why not they perform certain practices, but also the overall, comprehensive farming philosophy a farmer possesses. The small farmers who identify as sustainability-aligned farmers orient themselves toward a sustainability ideology that they feel sets them apart from farmers who do not share this ideology. This sustainability ideology serves as an identity classification for these farmers in that it *gives them a sense of who they are as farmers and as people.* To them it is not just about implementing cover crops and fertilizing with manure; nor is it solely about using those methods in order to boost soil fertility. Rather, it is about a fundamental worldview that governs the practices and the underlying reasons. It is the ideology that feeds their on-the-ground practices and shapes the farmers' interactions with other farmers and agricultural organizations.

Farmers who identify toward the "sustainability" end of the spectrum interact much more frequently with other sustainability-aligned farmers. It is the same for the conventionally-aligned farmers, they too interact more with other conventionally-aligned farmers. The interactions I am referring to are specifically those relating to farming such as seeking advice, offering help, or any type of general collaboration regarding agricultural issues. Even though they are all incorporating many of the same sustainable practices for many of the same reasons, the strict division that has emerged within "sustainable" agriculture and "conventional"

agriculture separates the farmers, influences their perceptions of one another, and prevents them from frequent, beneficial collaboration.

Sustainability ideology and rhetoric shape how people perceive themselves and others and has created a rubric of identity. Those who subscribe to a sustainability ideology identify with others who do the same in similar ways. People can usually identify others who are part of this sub-culture by recognizing the use of sustainability rhetoric. They can also compare the other person's "degree" of commitment to a sustainable lifestyle against their own which often results in a bifurcation of a compounded relationship of "us/them". The sustainability-aligned farmers recognize whether other farmers have a sustainable philosophy that govern their practices, which contributes to categorizing farmers as sustainable or not and thus the "us/them" polarity. Sustainability-aligned farmers have often discussed this type of distinction with me saying, "Yeah those farmers do all the right stuff, but they just don't get it. They think because they use sustainable methods that it makes them sustainable farmers and it doesn't". The "they just don't get it" refers to not understanding everything that "being sustainable" entails.

To many of the sustainability-aligned farmers, sustainability is something that is *more than specific practices*. It is even something in addition to sharing many of the same first type of reasons for using sustainable practices. Sustainability is about fundamental beliefs about the environment, human beings, and the world. It is about identity and belonging. One sustainability-aligned farmer explained to me:

> I would say they think if they don't use as many chemicals or if they try to do local business with local people then that's what they think is sustainability. Also they think being able to make a profit or living out of it and keep farming and not lose money on it, then they think that's sustainable. I think that for a lot of them it's more about the economics and actual growing practices then it is about sustainability… they are missing something.

This "something" is often a shared understanding that there can be something missing from farmers that are doing everything else "right" such as using sustainable practices for the same first type of reasons such as improving the soil. Even if conventionally-aligned farmers are improving the soil, the sustainability-aligned farmers are evaluating them from a different perspective, which analyzes their underlying reasons for wanting to improve the soil. For instance, are farmers improving the soil so that they can grow more crops or are they improving the soil to improve the nutrition of the food grown as well as replenish organic matter?

However, because all of this is highly subjective to each individual farmer the "something" can change depending on who identifies it. For example, the "something" can be a steadfast dedication to environmental stewardship, while in other cases it is a balance between environmental stewardship and financial success. Due to its subjective nature different farmers identify with the different lines of thought as to what the bigger picture of sustainability is and who is or who is not a truly sustainable farmer. This then creates the space for belonging because farmers will identify with the line of thinking that is most agreeable to them and therefore creates the designated groups of "us/them" or sustainable like me/not sustainable. The aspect of belonging is key to establishing an identity for oneself not only vis á vis conventional farmers, but also other sustainable farmers that are not sustainable in the same ways. Therefore, I found that farmers identify "sustainable" farmers against "conventional" farmers (strict us/them categories), but also "sustainable" farmers evaluate other "sustainable" farmers by degrees (blurred us/them categories).

The degree of farmers' advocacy for using particular methods and denouncing others definitely sets them apart in one another's eyes. It becomes a highly nuanced space of degree, emphasis, and articulation with the evaluators often using themselves as the comparative

measure. For example, a farming couple may describe themselves as sustainable farmers, but another sustainable farmer may feel that the couple is "not really sustainable" because they use black plastic. There becomes not only a division between farmers who are sustainable and those who are conventional, but also a demarcation based on different degrees among sustainability-aligned farmers. As one sustainability-aligned farmer explained to me:

> We try to be as sustainable as possible. There are so many things we do and more that we want to do. We love that we can use on-farm inputs. That is a really good way to capture our own resources and put them back into the farm. But, there are other farmers that say they're sustainable or that they are trying to be, but then they don't use on-farm inputs. They could if they really wanted to, but I don't know I guess they just think it's not important. It is though, you know. And maybe then they aren't really sustainable because they have to bring in stuff from off their farm to make it work.

I have included a diagram below which illustrates the relationships that are formed from blurred us/them (sustainable like me and not like me) and us/them ("sustainable" and "conventional") polarities. Each circle represents groupings of farmers as determined *vis-à-vis* individual farmer identities which creates different "circles of identity." For example, Farmer Bill identifies as a sustainable farmer and classifies other farmers who he feels are the most "sustainably similar" to him which then comprise his network of farmers as reflected by the inner circle in the diagram. The next circle includes others sustainable farmers, but who Bill considers to be "less sustainable" than him or who are "missing something". The outermost circle would be those farmers who he identifies with the least, i.e. conventionally-aligned farmers. These circles also represent with whom Bill interacts and the most interaction and cooperation occur at the center of the circle and then decrease as he moves toward the outside of the circles. This is also true of conventionally-aligned farmers, although I did not find the

middle circle (blurred us/them categories based upon degrees) to exist as predominantly among their categorizations.

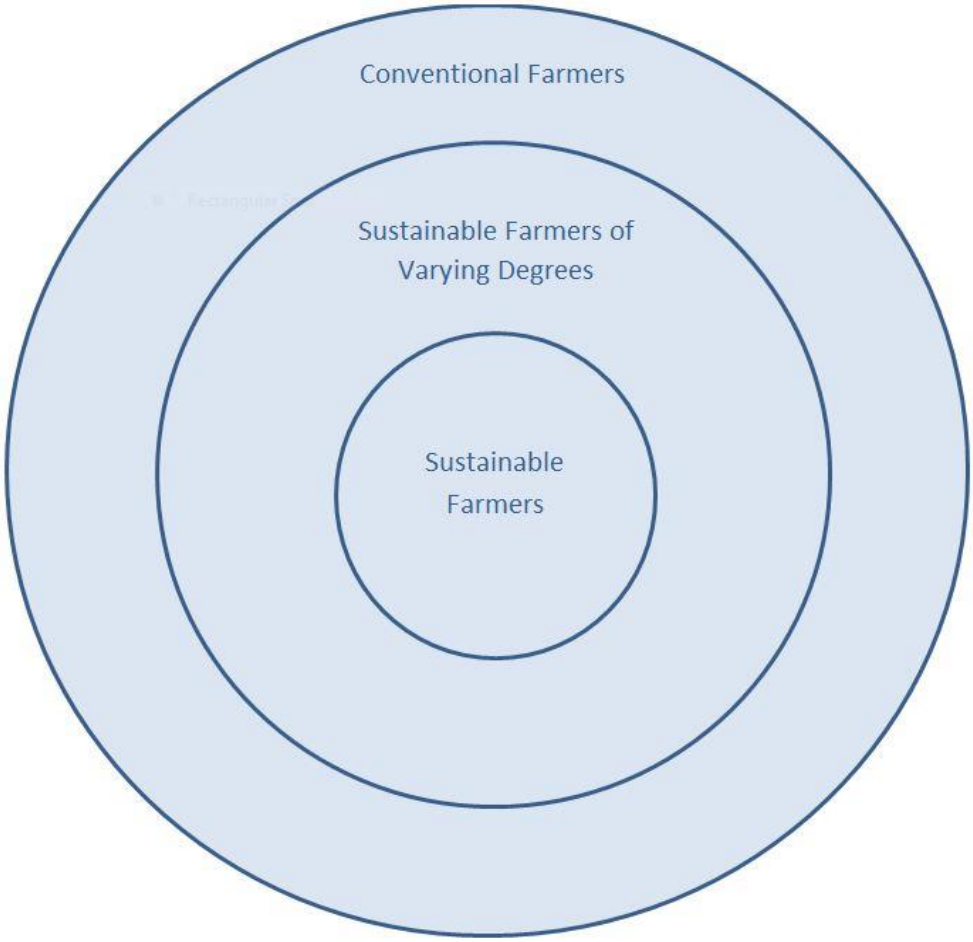


Figure 13: Farmers' Interactions Based on Identities

The size of each circle also reflects the size of the grouping within that category. The construction of the different identities as perceived by each farmer manifests in how much that farmer interacts with other farmers concerning farming issues. The number of farmers that one most strongly identifies with is the smallest and then increases as fewer commonalities are perceived. The point of this illustration is to show how much more would be available to

farmers if they did not participate in the compounded and nested bifurcation of "sustainable" and "conventional" farmers. By strictly adhering to the division between sustainable and conventional, the farmers severely decrease their resource pool. If the labels and the strong attachments to them could be broken down, then farmers would have more people they could access in terms of information, knowledge, and experience.

There are at least three elements which I have found to contribute to shape sustainability-aligned farmers' identities: 1.) the practices a farmer uses; 2.) the first and second types of reasons they give for using certain practices and the degree to which they are committed to those reasons; and 3.) their overall farming philosophy. All three of these phenomena need to be recognized because they explain why there is not more collaboration between rural, small farmers – they have created "us" and "them" categories. Identity is steeped in personal interpretations and experiences of every field of life including the social, political, economic, cultural, and environmental as well as the dialectic relationship with the individual and the continuous reinventing of those forms of life (Biersack 1999, Bourdieu 1977, Giddens 1986). Farmers go through this process as well. How they farm, the farming operations, the practices, and the philosophies are representative of how they interpret the world to be and what it means to exist within it.

Most of the farmers who identified as sustainability-aligned farmers hold environmental concerns as very important and they attempt to farm in ways that are either less environmentally damaging or more environmentally beneficial. They tend to place this morality above other concerns such as economic or social concerns. However, not all farmers interpret what is "less environmentally damaging" and "more environmentally beneficial" in the same way and this leads to different degrees of farming sustainably as well as a continual negotiation process of

trade-offs. Even though within the sustainability-aligned farmers there is a moral imperative regarding environmental impacts of farming, the practices and ideologies do not all look the same nor do they occur in the same ways on the same farms consistently. This testifies to not only the fluid state of sustainability, but the fluid state of human behavior. One of the most idyllic farms in terms of sustainable practices and sustainability ideology is Sapphire Ridge Farms owned by Marc and Suzie. Marc explained it to me like this:

> I think that maybe the way we're different from a lot of people is kind of our focus on financial sustainability as well. You know, I mean kind of the way we came to this just buying this farm with getting a mortgage and basically putting everything we had into it and the possibility of us losing it was very real right from the get-go and we kind of knew we had to be financially viable to stay here.

Marc believes that his focus on the financial side of farming sets his farming philosophy apart from other sustainability-aligned farmers' philosophies. He continued to tell me that other farmers aren't as concerned with the financial component because they treat the farm more as a hobby, rather than a business. The farmers at Sapphire Ridge Farms display a strong commitment to the ideology of sustainability, but they also demonstrate a complex morality of environmental concerns and financial stability, two elements which are often portrayed in the sustainability literature as being at odds with one another. In addition, Marc and Suzie do not hide their desire to make money which has caused other farmers to liken Sapphire Ridge Farms to "the Walmart" of farms around the area. The analogy is meant to criticize and reflects that some farmers believe that to truly subscribe to sustainability ideology money should not be a strong guide on their moral compass. The farmers that believe this will talk about needing to make money, but they feel it is not in the same way that the farmers at Sapphire Ridge do. This illustrates the nuances and subjectivity involved in farming identities whether they are identities

applied to oneself or labeled by others. For example, Paul and Liz, sustainability aligned farmers, have often described Sapphire Ridge Farms as "Walmart."

> Paul: They are great people, but their farm just seems to have gotten really big.
> Liz: I mean they're still a small farm, but they seem to focus on being successful instead of, I don't know, thinking about what they are actually doing or trying to accomplish.
> Paul: That's why we refer to them as "Walmart."
> Liz: I mean we are trying to do a lot with our farm, yes we want to make money and we hope the farm can support us someday soon, but we also want the farm to help our quality of life and send a message to people about what we do here. We are doing some important things to help change the way food is thought of.

The criticizing analogy also demonstrates the emotional element which occurs frequently in identity-creating processes. Part of creating an identity either for oneself or others is a desire to belong or not belong and to have others to belong or not belong to a particular community. In this context, community is an abstract place which exists because of shared identities, interests, and philosophies á la Benedict Anderson's imagined communities (Anderson 2006). Some farmers want to belong to a "sustainable" farming community or a "conventional" farming community. The farmers who want to belong to a particular community carry with them strong emotions and feelings concerning this *belonging*.

I have found that the strong emotions and feelings are most often articulated through expressions of who should *not* belong to their community such as the example with Sapphire Ridge Farms. It is a quintessential sustainable farm, but some farmers feel it misses the mark. This act of expressing who should not belong is an emotionally charged act and illustrates why a distinction must be made between sustainable practices and sustainability ideology and even *ideologies* as we see with the Sapphire Ridge Farms example. Although the goal of this research is to unite farmers by showing them that they do many of the same things, it will not be easy for those farmers who feel that even though the practices are the same, there is still something

missing from other farmers who might not "get it". The farmers that "get it" have built their own identities around this concept – that there is something more to sustainability than sustainable practices.

There is a similar context within small farmers who identify as "conventional" or "leaning toward conventional" in that some of them feel that the sustainability-aligned farmers criticize and ridicule them. The farmers that feel this way have a special reason for being upset by it in that they are cognizant of the fact that they are using many of the same practices as the sustainable farmers. To them this is a further indignation. As one conventionally-aligned farmer explained to me:

> Oh yeah those farmers down the road they think they know so much and are better than everyone because they are sustainable, but we are doing the same things as them we just aren't telling everyone about it. And they won't even buy from us because they saw us one time when we were spraying. We have a good product too, you know, we just didn't want to lose it, so we sprayed.

This conversation is not unusual and reveals the delicate nature of the passionate feelings involved in farming practices, ideologies, and identities. Some conventionally-aligned farmers do not like to feel scorned by sustainability-aligned farmers because it makes them feel as though what they are doing is morally wrong, but for the conventionally-aligned farmers who recognize that they are doing many of the same things on their farm, it is particularly frustrating and offensive. When I asked a Shawn, a conventionally-aligned farmer, if he collaborated much with his neighbors he said:

> Oh my goodness no. They don't like the way we do things on this farm or something. I mean, we do a lot of the same stuff, I don't really see how it's that much different, but they don't like us or something. Maybe if we threw the word sustainable around more then we could, but we just farm like we do and I think it works. It's ridiculous really. We've been doing this stuff a lot longer than they have.

One way in which conventionally-aligned farmers have "fought back" against the bad publicity sustainability rhetoric has caused farmers identifying as "conventional" is to harness some of the conventional farming rhetoric. While sitting down to dinner with two members of a conventionally-aligned farm family, they told me:

> We are growing food and raising cattle to feed our families. And a lot of it goes to our neighbors too, our community. But not just them, but the families in America as well as the entire world. There are a lot of farmers like us and there are people all over the world who are eating the food that we all are growing. That's good work, that's hard work.

The sense of this enormous responsibility has restored much pride back into the hearts of many of the conventionally-aligned farmers and has established a moral good in their work. Many of the conventionally-aligned farmers in my study talked of this same responsibility and often within the context of discussing sustainability. They do not adamantly believe that strictly sustainable methods could not feed the world; it is just more about the way in which they farm, sustainable and conventional methods fused together, that *is* feeding the world. Although this rhetoric is tied up with agribusiness' profit interests, for the conventionally-aligned farmers it serves as a source of responsibility and privilege.

I did find one example of a farm family who disregarded the "sustainable" and "conventional" labels while conducting my research and the farmers on "both sides" have benefited immensely. They contact each other for advice regarding farming problems and challenges and also for extra physical labor in a reciprocal relationship that resembles that of rural communities. They also have been able to diversify their farms because they can grow different products for each other and incorporate them into their operations. The benefits that they have received from the cooperation and collaboration far outweigh those of maintaining a

system of labels which lends to the polarization of farming philosophies and thus a closed system of information and resources. I discuss this relationship in more detail in chapter 7.

4.5 INSTITUTIONAL INFLUENCES ON THE DEMARCATION OF SUSTAINABLE AND CONVENTIONAL AGRICULTURE

Not only are there on-the-ground designations, interpretations, and judgments expressed by the farmers themselves as to who is sustainable or conventional but there are also structural forces that fashion the different categories of agricultural operations as well. There are many different institutions, corporations, and organizations that directly involve themselves with the pursuit of sustainable agriculture and each have their own philosophies and agenda that shape and affect the ideas and discourses of sustainability. Some examples of these institutions, corporations, and organizations are the United States Department of Agriculture, the W. K. Kellogg Foundation, the California Alliance for Sustainable Agriculture, a multitude of state Buy Fresh Buy Local organizations, The Food and Agriculture Organization of the United Nations, the World Bank, and numerous universities and colleges either through Cooperative Extension or other programs. With such big players as these, it is little wonder that sustainable agriculture has becomes such a complicated issue.

The two groups that the small farmers in my study associate with the most are the Pennsylvania Association for Sustainable Agriculture (PASA) and the Sustainable Agriculture Research and Education Program (SARE). PASA is a member based organization and is the largest for sustainable farming in Pennsylvania. However, it reaches farther than that and boasts members outside the state as well and several of the small farmers in my study are PASA

members. SARE is a program within the United States Department of Agriculture and their focus areas are defined by regions. Both of these organizations are largely influential on shaping farmers' ideas concerning sustainability. They have listservs, blogs, and newsletters, but perhaps more influentially they have large and well attended conferences, field days, and numerous workshops and classes. Almost all of the events except for the conferences are held on different farms and there is usually a potluck lunch that is communal. This kind of conviviality is very much intentional as the goal is to create a shared identity to which the farmers can all belong.

Along with creating a sense of belonging the organizations also claim their own definitions of sustainability and have created specific rhetoric. Much of the rhetoric emphasizes the tripartite version of agricultural sustainability which stipulates that farming should be done in ways that "improve economic viability, environmental soundness, and social responsibility" (PASA 2014). There is also an overwhelming rhetoric that has evolved that is very much set in opposition to conventional farming. In fact, that is how sustainable agricultural rhetoric is often discussed – from a rhetoric that consists of framing it as an *alternative* to conventional agriculture. SARE has published two editions of a book entitled, *The New American Farmer* (Berton 2000). The idea behind rhetoric of this kind is that it is a *new* alternative to the *old* ways of conventional farming. Within this rhetoric the two operations are very different: conventional farming is driven by profit, damages the environment, erodes the community, and is out-of-date; while sustainable farming improves the environment, strengthens the community, draws from current agricultural research, and still generates a profit (Berry 1965, Lyson and Guptill 2004, Pollan 2006, Shiva 2013). Both PASA and SARE circulate this rhetoric.

In addition to a discourse that sets sustainable agriculture and conventional agriculture in opposition to one another, there is another element which furthers the separation. In fact, this

element is inherent within the concept of rhetoric and that is the agenda or motivation for creating a different way to think and talk about agriculture. If a new way of doing something is going to be promoted then it needs to be different and "better" than the previous method. In this case sustainable agriculture is the alternative to conventional and by the rhetoric used it is better for the environment, the economy, and society.

In order to acquire supporters sustainable agriculture needs to be different and therefore highlight those differences rather than the similarities. For sustainable agriculture to be its own form of operational farm management it needs to be framed as far apart from conventional agriculture as possible. Here is where the other defining element other than the one deriving from the discourse arises: organizations like SARE and PASA rely on creating and maintaining that difference in order to survive. PASA and SARE need financing in order to pay their staff, hold conferences, workshops, and classes, and also distribute grants.

These types of events require large sums of money and that money comes from donations from individuals and governmental programs. They need people to identify with them, believe in the irreconcilable difference between sustainable agriculture and conventional agriculture, support their practices, and donate portions of their income to facilitate their operations. Not only do they disseminate their sustainable advocacy from the platforms of conferences and the microphones of workshops and classes, but they also can select which farmers and researchers should receive financial support. These grants are a powerful way to shape what kinds of ideas, practices, and research fit with their interpretations for what constitutes as sustainable thereby reproducing their own versions and definitions. Allen explains that:

> Grants awarded reflect the interests both of the institutions and those of movement participants who apply for funding. Priorities and pathways for achieving sustainable agriculture and community food security are operationalized primarily through these competitive grant programs… Institutions

> and leaders imbued with expert status have the power to construct and determine social and political "reality". Programs in sustainable agriculture and community food security mark decisive moments of political and ideological construction in which the meanings of these social movements are codified and operationalized and problems are defined, studied, and "solved". [Allen 2004: 56-57]

From 1988 to 2013, SARE awarded $1.7 million in grants from sixty-nine projects to West Virginia applicants alone. These numbers do seem impressive, but SARE has handed out even larger sums of money. For example California applicants received $8.5 million from one hundred and thirty-one projects since 1988. This impressive sum is not solely due to California being a large state because Vermont applicants received $6.4 million from one hundred and eighty-one projects and Pennsylvania claimed $9.8 million from two hundred and eighteen projects (SARE 2014b). The difference between states for the grants they received however is not the critical point, rather the millions that have been delegated to specific sustainable projects illustrate the power these organizations have for reinforcing their sustainability rhetoric and their specific interpretations of sustainable practices.

Delving deeper into funding projects reveals not just the power that institutions and organizations have for shaping and constructing reality, but also the ability for these entities to harness the benefits from a specific rhetoric while at the same time funneling the money into the same type of fundamental research as conventional agriculture. They describe themselves as different, but many of the projects that receive grants for sustainable agricultural research reflect the same fundamental conventional agricultural research interests. For instance, according to Buttel (1993), "the impetus for and the legitimacy of sustainability come from natural science, natural scientists, and natural science data" (Buttel 1993:26). Patricia Allen found in her study of sustainable agriculture in California that:

> This is reflected in public sustainable agriculture programs. In both SARE and UC SAREP (University of California Sustainable Agriculture Research and Education Program) the overwhelming majority of research dollars for sustainable agriculture goes to natural sciences and focuses on farm-level projects and production innovations, while a much smaller amount is devoted to social constraints and possibilities. [Allen 2004: 96]

Allen also argues that much of the research and projects within sustainable agriculture focuses on the same fundamentals that conventional agriculture does – increasing production on the farm – it's just that sustainable agriculture tries to do this in environmentally friendly ways. Within the projects SARE has funded, 76 percent have been in typical agricultural production areas such as pest management, animal production, crop production, horticulture, and integrated farm and ranch systems (Allen 2004). SARE has posted on their website that their vision is, "an enduring American agriculture of the highest quality. This agriculture is profitable, protects the nation's land and water, and is a force for a rewarding way of life for farmers and ranchers whose quality products and operations sustain their communities and society" (SARE 2014a). The high percentage of "typical agricultural production" projects funded reveals that there is a discrepancy between the rhetoric SARE uses and the actual on-the-ground projects they enact with their research and funding. This problematizes the perceived contrast between conventional and sustainable agriculture and with the addition of the findings from my study, which uncovered the mutual utilization of sustainable practices on the small farms, strongly demonstrates the need for reconciliation between the two seemingly disparate methods of operation.

Organizations also host many agricultural events that are open to the community, but attendance is usually shaped by the different farming alignments. The distinction of which type of farmer attends which type of event illustrates the feelings of difference between the different

alignments of farmers. It also demonstrates that the practices and philosophies associated with those alignments will be kept more closely within the corresponding categories of farmers because there is limited cross-over among the events, thus minimalizing opportunities for collaboration. In addition, demarcation of the borders that frame what is "sustainable" and what is "conventional" are continually reinforced by the "segregation" of the populations attending the agricultural events. I have included a table below which illustrates the attendance to agricultural events by the different categories of farmers.

Table 6: Attendance of Agricultural Community Events[21]

	Sustainable or Working Toward Sustainability	Conventional or Learning Toward Conventional	Cross-Over
PASA Workshops and Conferences	X		
Farmers Markets	X		
Farm to School Meetings			X
West Virginia University Agricultural Extension Workshops		X	
Local Stockyard Auctions		X	
West Virginia University Small Farm Center Conferences			X

[21] Of course there is cross-over for all the events at different times. This table is meant to reflect an overall majority of who is attending which type of events.

4.6 CONCLUSIONS

The label "conventional" farming has come to be equated with many harmful forces, regardless of the type of "conventional" operation: environmental damage, greed, climate change, top soil erosion, water pollution, uniformity, monocultures, resistant strains of insects and fungus, and loss of biodiversity. Due to sustainability rhetoric, many people have come to understand that conventional farms and all of the negativity associated with them are any farms that do not identify as sustainable farms, regardless of size and scale. Many of the small farmers in my study who identify as conventionally-aligned farmers are trying to fight many of the same adverse effects which can derive from agricultural practices; they do not want to damage the environment any more than sustainability-aligned farmers do. A second generation conventionally-aligned farmer explained to me:

> It's really hard, you know, because my father started this farm and he taught me how to farm it and one of the main things he told me was that, I had to take care of this land because the land takes care of us. It's not just that though either, because I like this planet, I like the animals being here and they help my farm, and I like the bees too. It's like that guy said, that radio guy, Paul Harvey I think was his name, he made a speech about how farmers are tough people, you know, and they want to take care of the earth.

This farmer was not the first conventionally-aligned farmer to talk to me about a man named Paul Harvey who made a speech about farmers, so I read about him and the speech he made in 1978 to the Future Farmers of America Convention. An excerpt from the speech is:

> On the eighth day, God looked down on his planned paradise and said, "I need a caretaker." So God made a farmer.
> God said, "I need someone willing to get up before dawn, milk cows, work all day in the fields, milk cows again, eat supper and then go to town and stay past midnight at a meeting of the school board." So God made a farmer.
> "I need somebody with arms strong enough to rustle a calf and yet gentle enough to deliver his own grandchild. Somebody to call hogs, tame cantankerous

> machinery, come home hungry, have to wait lunch until his wife's done feeding visiting ladies and tell the ladies to be sure and come back real soon – and mean it." So God made a farmer.
> God said, "I need somebody strong enough to clear trees and heave bails, yet gentle enough to tame lambs and wean pigs and tend the pink-combed pullets, and who will stop his mower for an hour to splint the broken leg of a meadow lark. It had to be somebody who'd plow deep and straight and not cut corners. Somebody to seed, weed feed, breed and rake and disc and plow and plant… So God made a farmer. [Harvey 1978]

The speech gained more popularity when Ram Trucks used some of it in their commercial which aired during the Super Bowl in 2013. However, the farmers didn't mention that it was used in the Super Bowl; instead they talked about how proud it made them feel. After several conventionally-aligned farmers talked to me about this speech and the fondness they have for it, I began to think it was something that appealed to conventionally-aligned farmers specifically. Until one afternoon while helping a sustainability-aligned farmer plant celery seeds in his grow room the conversation moved toward his motivations for being a farmer and if there was anything else he "wanted to be when he grew up." He told me that he always knew he wanted to be a farmer and couldn't imagine doing anything else. Then he told he wanted me to listen to something that would help me to understand what he means. Minutes later I heard Paul Harvey's voice over the farmer's cell phone and we listened to the "So God Made a Farmer" speech while we dropped seeds the size of specks of dust into the rich, dark soil.

There are specific agricultural practices which farmers can adopt that enhance rather than damage our planet and they are identified as such by sustainable farmers, researchers, advocates, organizations, and institutions. Many of these same practices are used by the sustainability-aligned farmers and conventionally-aligned farmers in my study. This is extremely important to recognize in order to begin to dissolve the inaccurate and inadequate labeling of conventional farms. The way that small, conventional farms are thought of today is limiting and does not

provide for the true spectrum of creative practices that are employed on the small farms in order to take better care of our planet and our families. The importance of recognizing that sustainable practices are used on small, conventional farms will increase our resource pool in regards to finding new and innovative ways to tackle sustainability issues. We can accomplish this if we do not let labels blindly keep us from investigating what some farmers are doing to meet the challenges of a globalized world. I was walking the fence line on a hot July afternoon with a conventionally-aligned farmer and he was telling me about his current and planned projects on the farm:

> I have oats planted over there in that field because not many farmers in this part of town grow that. And a lot of the horse farmers well, they are looking for a supplier in the area. I've also started a pilot project for wheat because I've started taking it to a mill so that we can have some locally grown and milled flour in the area. I'd love to get a mill closer because the one I go to is about two hours away. I'm talking to some people about it, so we'll see. And you know, of course I'm doing the sheep raising thing because it used to be really big around here, but now so many people are dropping out and so I do it to help because the other farmers get a better price if we all pool our wool together and sell the wool. You know, like the wool pool that you came to. I also have some donkeys in there with the sheep because, you know, they will actually help to protect them, donkeys are good like that.

Evaluating whether a farm is sustainable is a highly nuanced, subjective, and emotional process and the same farm can be deemed sustainable by ten farmers and unsustainable by five farmers and an agricultural organization. It is not my goal to assign such labels, but rather to understand what sustainability means to these small farmers, the practices used to attain sustainability, and the on-the-ground dynamics created around the issues. From my research I firmly believe that it will be more helpful to recognize that sustainability ideology is something different than sustainable practices in order to achieve the goal of expanding collaboration. This

approach builds on the common goals which farmers share rather than applying over-generalized labels such as "conventional".

Separating the practices from the ideology further illuminates the complexity of the situation because it demonstrates that people are not just examining the *farm* for its sustainability potential, but the *farmers' values and beliefs* are involved in the analysis as well. This advances the delineation of sustainable practices and sustainability ideology because sustainable practices have more to do with the farm and what is being done on the farm and sustainability ideology has more to do with the farmers and what their ideas and values are about farming and lifestyles. So sustainable practices are more about evaluating the farm and sustainability ideology is more about evaluating the farmers. This distinction paints a clearer picture that we are dealing with people, their identities, morals, and aspirations and will emphasize that the issues need to be handled with respect and sensitivity.

Currently, many farmers are setting themselves apart using the trite labels of "sustainable" and "conventional" as well as further problematizing those labels by incorporating to what degree they and other farmers are sustainable or conventional. By encouraging collaboration it is therefore vital to take into strong consideration that for many farmers their identity as farmers and as people hinges on these distinctions. Recognizing this essential element will make collaboration a much smoother transition. By appreciating the identity that these farmers need, they will feel more confident of who they are and more willing to listen to other ideas from *different* farmers. We must give them this space and respect that the very core of who they are as farmers and as people is rooted in their understanding that they are doing something meaningful and purposeful. This acknowledgement will help to cushion the ideas of

difference initially and then once they all began working together, I believe they will then come to respect one other in their own ways.

The farmers are infusing their judgments with very passionate feelings of different moralities (Browne 2009, Robbins 2009). Therefore, it is very important to understand that moralities in this sense are governed by farmers' ranked goals, which are achieved through agricultural practices and which can vary depending on different values as well as worldviews. It is often assumed by many, especially in today's concern for global climate change that environmental consciousness is a moral high ground, but we must understand that morals are also a field of life, one which is shaped and re-shaped by structural and agentive forces. Environmental consciousness is not the only recognized moral imperative. To many, feeding one's family or financially supporting one's family is also an arrow on the moral compass. In the pursuit of understanding humanity we must remember that the different expressions of concern for the individual are no less important than the concern for the environment. Ranking them does not help us to understand the dimensionality of the lives of the people.

Returning to the example of Sapphire Ridge Farms, Marc and Suzie both include financial sustainability within their approach to creating a sustainable farm as well as a sustainable lifestyle, although this often contributes to their image of being compared to Walmart. Marc explained to me that it does not bother him very much, that other "sustainable" farmers refer to his farm as the "Walmart of sustainable farms" because this tells him that he is succeeding in his business.

> We are trying to make it by living off of our farm, so of course we need to make money at it. We have a family to support, why wouldn't I consider how much money we make and want to make enough of it to live comfortable. We also do our absolute best to improve the land and soil, but I think, for us, what makes us different than other sustainable farmers is our emphasis on financial sustainability as well.

The recognition of multiple moralities is an important concept to my research because it illuminates one of the foundational bases for understanding the reasoning used by farmers. I found a different prioritized morality present among sustainability-aligned farmers from that present among conventionally-aligned farmers. Most of the sustainability-aligned farmers expressed a morality which encompassed a deep concern for the environment and future generations. While conventionally-aligned farmers expressed these same concerns, a morality which encompassed a concern for their families and the larger world population whom they feel they are feeding was prioritized.

To be more specific about what I mean by morality, I have borrowed Andrew Sayer's definition which refers to morality as stipulating norms (informal and formal) and values regarding what is fair, what constitutes good behavior toward others, and indicates an overall good (Sayer 2005). This definition is useful because it allows for individuals and not just religious or cultural groups to be included in the construction of a morality. It also helps to connect the most abstract and meaningful realm of human life with the everyday matter of living (Browne 2009). The criticism of many of those who subscribe to a sustainability ideology is that the "other people" (referring to those who do not subscribe to a sustainability ideology) do not care about the environment or the future generations. This is then often described or summarized as "other people" are heartless or greedy. However, the recognition of a different morality, rather than a lack of morality removes this judgement for how "other people" view and act in the world.

The lack of acknowledgment and respect for multiple moralities was often recognized among the conventionally-aligned farmers in my study. They often spoke to me about these frustrations. One conventionally-aligned farmer told me:

> Organic farmers think that we don't care about certain things, like the planet, but we do care. I also care about feeding my family and feeding the world, and sometimes I have to make a choice to do something that those other farmers don't like, but otherwise I would lose my crop and people would lose their food. But most of the times I can do both.

The conventionally-aligned farmers have a moral set which differs from the sustainability-aligned farmers, *but that does not mean that they do not have one*. Browne (2009) explains that there is a difference between the morality of the social good and the morality of individual choice. For some culture groups as well as individuals morality is seen as what is best for society, often at a perceived cost to the individual, but for other culture groups or individuals morality is established within a personal freedom, often at a perceived cost to society (Browne 2009). Using this theoretical lens, sustainability-aligned farmers frequently harness rhetoric which champions a morality based upon what is best for society, while conventionally-aligned farmers employ rhetoric which focuses on fulfilling the needs of the individual, family, and a much smaller sense of community.

The idea of individual freedom as one type of morality is also supported by Regenia Gagnier. Gagnier argues that individuals have been freed from a system that had allowed little space for "autonomy or individual empowerment" (Gagnier 1997). Further, a "moral good" is constituted by the fact that individuals have the ability to make choices that they didn't have before (Carrier 1997). Gagnier and Carrier refer specifically to the market economy and argue that morality does exist within it and directly call into question those claims that the market economy is amoral. Those who characterize the nature of the market economy as amoral tend to interpret Mauss' work on "gift economy" societies as morally superior models (Browne 2009, Mauss 1990). Gagnier and Carrier's insights are especially pertinent to my research in that it reiterates the dangers of juxtapositions in that "only by letting go of ideas about morality built on

oversimplified juxtapositions can we hope to realize that all moral principles arise from certain social contexts" (Browne 2005: 13). It is our job as anthropologists to not place judgements on how people think and act in the world, but rather to understand and bring to the foreground the effects of these multiple moralities.

The conventionally-aligned farmers talked to me about how they feel they are taking care of their families and feeding the world, but the sustainability-aligned farmers often disregarded this sentiment because it is now mostly associated with Monsanto. They feel that the conventionally-aligned farmers have just borrowed the idea from the large, international agri-business. Monsanto and other agribusinesses use the "feed the world" idea as a marketing slogan, which further complicates the issue (Monsanto 2015). While shoveling manure on an early spring morning, a sustainability-aligned farmer said to me:

> I'm so tired of hearing all the conventional farmers talk about feeding the world. They only say that, you know, because the huge seed companies use it in their ads and stuff. We could feed the world with other methods; we don't have to use their methods. There have been studies showing it. I don't know, I guess I'm just tired of it.

Due to this association, the sustainability-aligned farmers discount "feeding the world" as having any real meaning or value. Thus, the concept has often been overlooked as being part of any significant narrative regarding a moral good.

One point which was mentioned frequently to me by sustainability-aligned farmers was their genuine concern regarding the use of chemical fertilizers, insecticides, and fungicides in agriculture, and they often advocated that sustainable farmers do not use those chemicals. However, many of these farmers do use chemicals to reduce weeds, increase soil fertility, eradicate pests, and eliminate fungus problems, but the difference to them is that the chemicals are certified organic. These farmers make a distinction between farmers who use organic sprays

and farmers who use non-organic sprays. However, in further problematizing this issue, many of the farmers who use organic sprays do not participate in the USDA farm organic certification process because they do not agree with the organic standards and feel that this type of labeling truly does not represent their farm, philosophy, or practices. These are extremely complex issues involving specific situations when farmers are comfortable with organic standards and other situations when they express criticisms regarding the standards.

A few of the sustainability-aligned farmers explained to me that they try not to use *any* chemicals because they believe that organic chemicals may poison untargeted species and contaminate the soil and waterways just as more conventional chemicals do. One sustainability-aligned farmer told me that, "many people are misled by the concept of natural because something that is natural can still be bad for humans and the environment." Still, there are instances when farmers, even those who hate to spray chemicals will spray in order to save a crop. It is within these types of decision-making processes that individual moral reasoning is teased apart to reveal the many different elements involved, such as environmental consciousness, profitability, adhering to personal philosophy and customer standards, cost of the chemicals, loss of a crop, and trade-offs. Therefore, in encouraging collaboration we need to recognize that farmers have their own identity and their own sense of moral goodness which can come from different foundational beliefs that need to be appreciated and respected in order to inspire knowledge and information to flow freely among these farmers.

5.0 HOW SMALL FARMERS UNDERSTAND AND VALUE THE LAND, ANIMALS, AND PEOPLE

In this chapter I outline the importance of examining the farm as an interrelated and interdependent entity comprised of myriad elements living in and on the land such as the vegetables, row crops, cows, pigs, chickens as well as the organisms living in the soil. The farmers work with these different nonhuman species to create a system of farming that they feel benefits the overall health of the farm and themselves. This chapter explores the intricacies of the relationships the farmers enter into with the nonhuman species on their farms and demonstrates the dialectical nature of such a relationship.

The farmers, although they take advantage of natural tendencies of certain species to fulfill "jobs" on the farm, are not entirely in control all of the time. They often need to respond to certain species changing roles such as invasive insurgencies, overpopulation, and poor nutrient retention. Their engagement with nonhuman species has been analyzed alongside the theoretical influences of other multispecies ethnographies. Following the details of the farmers in my specific study, I then present the theoretical background of scholarly multispecies ethnography which contextualizes the significance of including the relationships between humans and nonhumans on the farm. It is through this more holistic understanding of the farms' operations and systems that illuminates the nuances of decision making and negotiations in which these farmers participate. I then discuss how the farmers interpret and engage with nonhuman species

and how these relationships shape particular forms of value that become embedded in how the farmers perceive the morality of their work and the "good food" which they produce.

5.1 THE ECOLOGY OF MULTISPECIES

In chapter 4, I argued that these small farmers are often engaging in the same farming practices. I described that there are two types of reasons for why farmers utilize many of the same practices. The first type of reasons resonate with the farmers regardless of how they identified among "sustainable", "working toward sustainability", "conventional", and "learning toward conventional". These reasons such as "my soil is healthier because of these methods" or "my animals are healthier because of these methods" have much to do with how these farmers understand and value the land, the animals, and people; essentially how they understand and value their farm as a whole. The farmers see the farm and all of its components such as crops, weeds, invasive plants, insects, livestock, wild animals, soil, and organisms in the soil like bacteria and fungi as interdependent components which interact with and inform one another. For example, one conventionally-aligned farmer explained to me how he knows whether his soil is healthy or not:

> See those fields over there? There are different kinds of grasses growing there and those types of grasses tell me what I need to know about my soil like if I need to add anything to improve its fertility. Right now that's timothy growing, that's good stuff, tastes good, and is good for the cows, but if there was broom sage then I know that my soil has become too acidic and I need to add appropriate fertilizer to it. We like to use the manure from our cows because it's really good stuff and we have it right here on our farm, like you know we make it here, well the cows make it, laughs, and then we can use it and put it right back into our soil and it will help put the right kind of nutrients into the soil that will then provide the grasses with the right kind of nutrients that will then get to our cows. It's a nice

> little cycle. Salatin[22] has been preaching on this, but this is also the way my father and my grandfather did it… well Salatin talks about "keeping it on the farm" see that's his thing for how to use the nutrients your farm already gives you and instead of letting it, you know run off you use it and put it back into your farm. See, Grandfather has been doing that since before Salatin and we also learned how to read the grasses and the soil from Grandfather.

Another sustainability-aligned farmer explained this to me when I asked about who helps on the farm or who runs the farm:

> It's mostly me and my wife and the border collies. So, it's me, my wife, and the border collies and the cows, we all manage the farm because the cows are part of the management tool. They do what they do naturally, but it works out because it is also what we need them to do in order to help properly manage the farm. So we have them "do what they do" as much as we can.
>
> Now on our farm we recycle as much as possible. We recycle I'll say 100 percent of our nutrients. Now somebody could come back and say you have some loss and I won't argue that. Yes, yes there is some loss in terms of a small amount of nutrients are going to wash off the fields in heavy rainfall events, but we have major buffer, well I say major buffers, we have buffers around, on the home farm we have a buffer all around our surface water and the minimal buffer is like ten to twenty feet of grass. Now on the rent land during the winter I do let the cattle drink out of the creek so I do have some loss into the woods and into the creek, but other than that I'm shooting for near 100 percent retention of nutrients back on the hayfields and pastures. And it's worked well enough that I, I bought a little fertilizer in the last twenty years but very little, I mean, I could probably try to count it, laughs, probably less than ten tons of fertilizer for one hundred acres in twenty-some years. It works. It works and my soil fertility for the most part is at the low end of the high range which is where I want it. Now I have a few places where my potassium is in the medium range. I've never bought potassium fertilizer but I will buy hay which is high in potassium fertility, laughs, and feed that in areas that are low in potassium. I feed that to the cattle and most of it comes back out in the urine, a little bit in the manure.

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[22] Joel Salatin is a farmer and author. He runs a diversified farm in Virginia and has written several books that have been picked up by farmers and used basically as instructional manuals. His popularity has soared especially with those farmers advocating a special interest in alternative farming practices.

Both of these descriptions of the operations of the farms illustrate how these farmers understand what their farm is, meaning how they understand it as composed of many interrelated parts that can influence one another. The soil is dependent upon the cows because what goes into the cows will eventually travel into the soil, and the cows are dependent on the soil because the soil provides for the quality of diet they will consume which then ultimately ends up back in the soil, working to mutually replenish and inform one another. The second farmer describes his cows as "management tools" and this is because he uses the cows to help manage his hayfields and pastures and thus the soil. When he feeds hay to them which he knows is high in potassium, he specifically feeds this to them in areas on his farm which need more potassium. This way he uses the cows to help accomplish what his farm (the soil) needs and this is why he explains that it is he, his wife, the border collies, and the cows that run the farm. He could also have mentioned then specifically all the other components, but instead he describes how they all interact together: the grasses, soil, organic, and inorganic compounds (like potassium) to produce specific conditions and environments that comprise the farm and manage the farm.

Heather Paxson conducted pioneering ethnographic research on artisanal cheesemakers in the United States (Paxson 2013). In attempts to also thwart the pendulum-like focus from consumer back to producer she examines the producer, the producers' values and beliefs, and what informs these values and beliefs. In order to study those elements, Paxson devised a framework she refers to as ecology of production. In this model, the ecology of production is an inclusive framework of the farm ecology, the producer, the values and practices of the producer, and how they all articulate to eventually come together to inform and shape daily decision-making and practices of farm work. Ecology of production is "an assemblage of organic, social, and symbolic forces put into productive play in the service of a post-pastoral form of life, one

that seeks to work with the agencies of the natural world in a way that revitalizes rather than depletes those forces" (Paxson 2013: 31-32).

Paxson uses her experience on a sheep farm to explain her framework of ecology of production. When the shepherd, David Major, took Paxson on a tour of his cheesemaking facility, Paxson realized that the way of life Major was describing to her "was not ultimately about the cheese. To him making cheese for commercial sale represents a means to spend much of his time outside, 'directly engaged with the land'" (Paxson 2013: 31). Paxson learned that although artisanal cheese is a hand-made good, humans do not accomplish it alone and elements not necessarily expected such as grass, guard dogs, wool, meat, milk, bacteria, and yeasts are all part of the same agricultural process of cheesemaking when examined through the model of ecology of production.

> By situating artisan cheesemaking within ecologies of production I mean to call attention to the multiple agencies that contribute to agricultural enterprise, while also emphasizing that the dynamic capacities of a farm are harnessed through the capitalist mode of production to generate food for commercial trading as well as for eating. Ecologies of production, then, encompass nested spheres of production activity: first, the multispecies activity on a farm; and second, how the farm activity is made possible, organized, and constrained by broader social, economic, and legal forces. On this view, agrarian nature should be approached not as an objectified resource for value extraction but rather as a collaborator in the production of material and symbolic value. (Paxson 2013: 32)

After her explanation of ecology of production, Paxson discusses some specific examples of the multispecies involved in cheese making. She begins with the livestock which are the sheep and relates the farmers' explanations of how raising their sheep requires a complex system of balancing the nutrients the sheep need and receive from the grasses with the nutrients the soil needs to feed the grasses. She also relates personal farmers' stories of how they interact with the

sheep by understanding their species as well as personalities which guide the farmers in how they care for and keep them.

Paxson also examines the particular organisms that are used in the actual cheesemaking, specifically a variety called Vermont Shepherd. She relates a process that she helped with on one of the farms that participated in her research project. The cheesemaking occurred on that farm and shortly after the sheep had been milked.

> While whole, raw milk heated gently in the vat, I whisked a powdery starter culture of freeze-dried *Lactobacillus* bacteria into a pail of the morning milk, still warm from the animals' bodies. Feeding on lactose, the bacteria produce lactic acid as a waste product; this starts the fermentation process, called acidification. These bacteria are called starter cultures, and can outcompete harmful pathogens and are crucial agents in producing a food safe for human consumption. They also contribute to the resulting flavor, consistency, and identity of a cheese. Once the milk reached a uniform temperature between 70 degrees and 80 degrees Fahrenheit, [the farmer] stirred in rennet. Rennet is an enzymatic agent used to speed up the second key chemical process in cheesemaking after acidification: curdling, the coagulation of milk into curd. [The farmer] uses a mold-derived rennet rather than the standard substance extracted from the lining of the fourth stomach of suckling ruminants. [Paxson 2013: 47-48]

The practice of making cheese involves bacteria, yeasts, and molds. It is often described as "cultivating a microbial ecosystem" or "collaborative rotting". Not only are the farmers partnering with the different microbial species once the cheesemaking process has begun, but the farmers also have to tend the outside environment in which the cheese process occurs. For example, the temperatures must be kept at constants for different cheeses as does the humidity.

Paxson's theoretical work of the ecology of production supports my research with the necessary foundation for a specific examination of the relationships between the influencing factors of:

- The farmers' beliefs concerning ideas of sustainability as well as how the farmers understand, interpret, and classify the ecology of the farm including such elements as soil fertility, biosecurity of livestock, and proper nutrient levels in feed;
- How those understanding, interpretations, and classifications help produce actual practices and what the collaborations with nonhuman species looks like; and
- The structural forces such as market trends and US agricultural regulation and how these forces influence not only perceptions, but possible avenues of action as well.

Previous studies have seemingly treated the farmers as passive performers simply responding to the demands of consumers, the establishment of market prices, and the limitations of agricultural regulations. However, by implementing Paxson's methodological direction of focusing on the producers' point of view, I have been able to learn how farmers interact with and enter into a dialectic relationship with other players to then operationalize their beliefs into specific practices on the farm. These practices then become physical manifestations of the farmers' sentiments toward environment, community, market, and U.S. agricultural regulation. Like Paxson's artisanal cheesemakers, the farmers within my study construct value from their labor and from the specific production methods they have chosen to produce a specific food. Many are united by a belief that the agricultural practices implemented on their farm that make their foodstuffs taste good are fundamentally connected to personal values that make the foodstuffs good for them to make (Paxson 2013). For example, farmers who describe some of the practices they utilize on their farm to improve sustainability draw value from the operation of pasture grazing explaining that their cows are not only healthier, but also taste better.

The practice of pasture grazing and particularly rotational pasture grazing stands out quite exceptionally in the minds of those farmers in my study who choose to implement it. It is deemed as morally good because they strongly feel it is good for the soil and everything living in the soil as well as the grasses, the livestock or vegetables, and the humans who then consume the meat and vegetables. Pasture grazing and rotational grazing vary by degree among the livestock

farmers. Some farmers provide access for their livestock to graze in the pastures without too much rotation of pastures, but feed them minimal grain because they feel that grass fed is better for the animals, humans, and farm. Other farmers will move the livestock to other parts of pasture to give them more grass every few months, while still others will move their livestock every few days and when these cattle enter into a new pasture the grasses are up to the cattle's knees and sometimes even the farmer's knees. This practice is viewed as very virtuous, not just because the animals feed on the thick, lush grass or because the soil healthfully rejuvenates itself, but also because this particular operation reflects good management practices as well as a deep respect for the entire ecology of the farm.

Figure 14: Cattle in a rotational grazing management operation. Photo Credit: J. Reef.

A few of the sustainability-aligned farmers in my study were very dedicated to utilizing the practice of rotational grazing and in addition to cattle grazing the pastures within a rotation, they also add chickens to the sequence because they feel this is how to truly integrate the farm elements to generate a healthy farm and good food:

> With the rotational grazing you let the pathogens go, you know as you rotate the cows and chickens through. The pasture doesn't get seen for thirty days at a time so it's sitting there rejuvenating and the bugs are coming back and the grass is growing, you know and the sun bakes and sterilizes it and then thirty days later the animals come through it again then it rests for another thirty days. So it has that rest period where it can rest and get cleansed and works around that way and so of course we don't have to use wormers or these vaccinations and stuff because the cows are on fresh grass and they're not going back over where they were yesterday I mean they won't see that grass again for another thirty or forty-five days and by that time it's all taken care of. They're not going back and eating where they were yesterday and where they drop their droppings. They're not there they're gone; I mean the bad stuff is not there anymore.

> The rotational grazing is the biggest thing. We don't just turn them out into a field; they honestly get moved to a new paddock. Well the chickens get moved just every day, the laying hens get moved two or three days and the full netting gets moved and the broilers get moved every day if not twice a day and the cows are usually once every day sometimes every other day depending on the size of the paddock that they're in.

When I asked why there was a difference between the rotating schedule for laying hens and cows, it was revealed that:

> The laying hens are our clean cleanup crew. The cows grow through and deposit their goodies and then the chickens go through and in three days the flies have laid larva in it and then the chickens, the laying hens go through and they spread that out and instead of having a small cow pile you have one that is four or five times it and then the rain hits it and it's gone it disappears there's no lumps in the fields and so what they do is they have to stay in that paddock long enough to let the fly larva lay eggs. And of course that feeds the chickens and then they do their job and then that paddock is so much larger so it takes about three days for the cows to move to the chickens but then they might get moved inside that

paddock so really sometimes the laying hens are moved every other day just as everything else if it's a large paddock. We'll honestly move the huts to another section of the paddock and that kind of congregates them in the other side if they're not getting to it so yeah we try to keep everything moving basically about every day or every two days everything's moved to a fresh area so they can fulfill their job description.

Figure 15: Chickens in a rotational grazing management operation. Photo Credit: J. Reef.

The ideas expressed by this farmer concerning rotational grazing and taking advantage of the animals to "fulfill their job description" is very similar to another farmer's sentiments of using the cattle as "management tools". The way these farmers and others like them *see and understand* their farms as interrelated parts is used to achieve specific goals such as the omission of wormers and vaccinations. The assessment to not worm or vaccinate is heavily tied up in moral decision making in that these farmers feel that:

- The worming medicines and vaccinations are not good for the animals, meaning they may actually do more harm than good because the "medicines" are often interpreted as harsher poisons than other natural home-made remedies.
- If their farms are healthy habitats themselves then the animals should not be in danger of contracting serious bacterial or viral problems. This is expressed in the quotation above when the farmer explains the process and concept behind rotation grazing methods. The animals are not rooting around in their own feces to introduce the infections into their bodies in the first place.

The "partnering" with the different species of cattle, chickens, insects, bacteria, and fungi allows each species to perform the tasks they are best suited for and would otherwise gravitate toward in the wild, so to speak. Birds often feed on insects that are feeding off unused nutrients still available in animals' waste and both the birds and insects have particular kinds of biological systems that can withstand "foods" that would be considered rotten or spoiled to other species. This kind of practice has strong ties to the ideologies of what kind of farms the farmers want to have and they ultimately work to produce this goal. For example, many of the farmers who do not worm or vaccinate also practice rotational grazing to a strong degree of rotating the animals through the paddocks several times a week, they refer to this as intensive rotational grazing. There is a sense of pride when farmers tell me that they do not worm or vaccinate because to them it demonstrates that they have taken such good care of their animals that those sorts of illnesses are *not problems on their farms*.

Worming and vaccinating become highly politicized as I learned that farmers who do not worm or vaccinate share in a sense of pride which sets them apart from other farmers because they feel those farmers do not want to learn other ways of farming. They have told me that "those farmers could not vaccinate, but it's the way their father did it and his father so they think they have to; they do not know there are other ways."

This holistic understanding of the farm and the practices used to inform this understanding as well as influence it also serve as representations of value in that the farmers feel these ways fulfill their ideas of what they want their farm to be and what sets them apart from other farmers. An example of this is given when discussing rotational grazing concerning how rotational grazing farmers are different than "those farmers who just open the pasture gates in the spring and do not see their animals again until the fall". This sentiment holds within it a measurement and judgment directly relating to how farmers should care for their animals. Therefore, when farmers feel they are providing the best care for the animals and land they have also enabled themselves to avoid utilizing medications that, to them, are not safe for the animals or the people who then consume the animals. This contributes to their feeling of accomplishing morally good work.

The way the farmers' understand and conceptualize the farm as a set of interrelated and interdependent components shape and inform the specific ways the farmers assign value to and draw value from their farm. It is the specific practices and the reasons behind why the farmer chose those practices that illustrate how the farmer interprets the land, livestock, and people that comprise the farm. This also produces a specific valuation for that farmer through the work and labor, i.e. it adds value to the farmer's life. This process is known as "economy's tension" and refers to the relationship between market competition and the symbiosis of nonmarket dealings on which we all rely[23]. This "tension" influences people's desire to find meaning and value

[23] Examples of these nonmarket dealings are the things we do for neighbors, friends, and relatives that do not involve monetary transactions such as babysitting a niece or nephew while your sister is away and she watched your kids the last time, taking turns shoveling the sidewalks with our neighbors, and making a pie for a friend who just tilled your garden plot.

through their labor. This reality is especially illuminated on farms where the separate spaces of public (work) and private (home) are less obscured. In other occupations it is this separation of public and private that mask the interplay of economic and moral values through language (Gudeman 2008).

I found that the conception of the farm as interrelated and interdependent held firm across the different categories. It did not matter if the farmers identified as "sustainable," "working toward sustainability," "conventional," or "learning toward conventional," they still expressed an understanding of their farm as being made up of different components that are mostly living. The components respond to each other either through natural occurrences and direct intervention by the farmer and sometimes accidental interventions. Again this demonstrates the similarity in the practices of the farmers regardless of their identified categories as well as the first type of reasons for implementing them; i.e. a foundational perspective of the farm as a living organism.

The first type of reasons for choosing certain management operations such as nutrient retention and the specific practices that accompany them include not just an economic valuation as in saving money, but also the ideas of what is good for the land is good for the animals and vegetables which is also good for people. The farmers, regardless of alignments, share in several of the ways they acquire and produce value on and from their farms: 1) the conception of the interdependent nature of the farm, 2) how different species are utilized into management plans to fulfill their job descriptions, and 3) how this enables the farmers to create the kind of farm they imagined as juxtaposed with other farms. This is what Paxson described when she explained that the farmers in her study "craft value" from their work in the sense that all that goes into their work makes it good work as well as good food (Paxson 2013).

5.2 THE HUMAN AS "PARTNERING" WITH OTHER SPECIES: THEORECTICAL INFLUENCES ON MULTISPECIES INTERACTION

The study of exploring the roles of animals and other species with an anthropological lens has recently been growing interest (Mullin 2002). Although, the discipline of Animal Studies has not been fully embraced by all anthropologists because of the human-centric focus within the discipline; anthropologists have included animals in their studies for a long time although more or less as vehicles to examine social or cultural formations and processes (Evans-Pritchard 1950, Geertz 1973, Levi-Strauss 1963). The importance of adopting a model such as the ecology of production that not only incorporates the farmer's emic perspective of the role animals, plants, and other species have, but also draws upon the etic perspective of other social scientists' research on the multispecies environment will provide a more thorough understanding of the daily decision making and negotiations that the farmers in my study navigate. This provides different trajectories with which to examine the intricate processes involved in how farmers identify problems and challenges as well as how they develop and formulate solutions and remedies on a case by case basis.

Farmer agency has long been debated and many argue that globalization has structurally transformed the nature of agricultural production. Governments and agribusinesses are gaining more power and are able to greatly affect production methods and consumption habits (Bonanno, et al. 1994, Buttel, et al. 1990, Le Heron 1993). Although the constraints of structural, globalized forces have a large effect on agricultural practices, there have been studies conducted which analyze farmers' perspectives and relationships with other elements that affect behavior. David Lulka (2006) argued that grain and the degree to which it is fed to bison needs to be taken

more seriously because of "the effects it produces in agricultural regimes and the marketplace" (179).

Lulka found that those producers who fed grass to the bison were more aligned with a post-productive (alternative/sustainable) form of agriculture, while those who fed grain or finished with grain were more aligned with productive (conventional) agriculture (Lulka 2006). Lulka examined the different circumstances surrounding whether bison producers fed grain or grass and discovered that the varying degrees were often centered on the concept of what constituted "quality bison meat". Quality as defined by alternative farmers was about letting the animals live more how they would naturally, by eating grass and not feeding large amounts of grain to them. The grain can cause problems within the rumen of the bison by eradicating cancer–fighting omega oils and bison that eat grass also then embody "the taste of the land" (176).

The conventional farmers also used the term quality, but they discussed it terms of consistency of the final product. Grass produces a yellow fat instead of a white fat which is unattractive to some consumers and the quality of grass varies geographically. This thereby introduces new information regarding the bison industry, which does not simply associate grain with the agricultural analogy of output, growth, efficiency, and production (Lulka 2006). Lulka argued that by focusing his study on the use or non-use of grain among bison producers he illustrated the conflicted nature of the industry and its future.

The bison industry is categorized as an alternative form of agriculture because of its "health-conscious and environmentally friendly form of food production" (Lulka 2006: 175). These two attributes set the industry apart from other animal products such as beef. However, as more and more farmers feed grain to the bison because it helps them to overcome spatial and

temporal limitations, then the "bison industry's 'alternative' status would no longer be located in divergent production methods, but primarily in the material and thematic distinctiveness of the animal" (Lulka 2006: 177). It seems that the future of the bison industry will retain an "alternative" status, but more so because of its earlier ideological origins within that context rather than any specific types of alternative practices or management decisions.

This complicated and indistinct demarcation is a hazard of creating stark labels such as "conventional" and "alternative/sustainable" because it produces the problematic thinking that life can be placed neatly within one category. Lulka's work firmly demonstrates the complexities that are hidden when farming methods and decisions are analyzed through the lens of either "conventional" operations or "alternative" operations. I have found this same simplistic generalization within my own research of conventionally-aligned and sustainability-aligned farmers who are utilizing many of the same production methods. Similarly, there is also a "thematic distinctiveness" among these farmers as well in regards to the ideology behind the practices. In my study, it is the mass representation of separate management operations such as "conventional" and "sustainable" that has concealed not only the reality that these small farmers are doing many of the same things, but also the reasoning, values, and beliefs which have guided these actions. Lulka also found that all four of the major bison meat marketers[24] utilized grain-

[24] One of these four bison meat marketers is the marketing division of the North American Bison Cooperative (NABC). The NABC owns a large percentage of the bison in the country. The NABC requires its members to use grain. More often than not, when a consumer purchases bison meat in a grocery or restaurant they are receiving NABC bison. Ted Turner, the largest owner of bison in the world and worth 2.2 billion, is a member of the NABC and has developed a chain of restaurants that serve bison products (Lulka 2006).

raised bison. The irony is that consumers still harbor the mental image that the bison were raised on grass in hayfields and not in feedlots (Lulka 2006).

The perceptions held by consumers of what bison is supposed to represent, i.e. a healthier and more environmentally friendly alternative to other meat industries, are analogous to the perceptions that if a farm is labeled as "sustainable" then it utilizes specific practices and produces quality food that is separate and far different than the practices and food produced from a "conventional" farm. The idea is that the two must stand in stark contrast to each other. The assumptions that are made mask the reality of dimensionality which occurs on these small farms in north-central West Virginia within my study. Fortunately, the works of Lulka and Paxson are not the only testaments to the importance of a more inclusive examination of farmer decision making, negotiations, and agency.

The shift to include more nonhuman beings and multiple species studies rearranges the human-centric narrative which follows the fixed, rigid structures of binary forms to include more fluid, interactive multiplicities (Feinberg, et al. 2013, Ingold 2008). It can shed light upon what it means to be human in a multispecies world. "If we appreciate the foolishness of human exceptionalism, then we know that becoming is always becoming *with* – in a contact zone where the outcome, where who is in the world, is at stake" (Haraway, 2008: 244). Other scholars also discuss this concept of becoming *with* or "mutual becoming" whereas humans are constituted through continually changing relationships with other animals and objects (Deleuze and Guattari 1987, Ingold 2011, Kirksey and Helmreich 2010, Ogden 2011, Shaw, et al. 2010).

Kirksey and Helmreich remind us of the foundational writings of what is now referred to as multispecies ethnography when they reiterate the work of Lewis Henry Morgan's *The American Beaver and His Works*. In this piece, Morgan argues for animal rights in the basis of

the supreme engineering knowledge used by the beaver to create the dams, lodges, and canals (Kirksey and Helmreich 2010, Morgan 1868). Kirksey and Helmreich also argue that animals are not simply "good to think [with]" (Levi-Strauss 1963), or "good to eat" (Harris 1998), but are now also entities "to live with" (Kirksey and Helmreich 2010: 552). The "living with" of course, takes many forms and the *Homo* is not a clearly bounded subject any longer. The premise of *Homo sapiens* as being set apart from other life forms based on "man the thinker" has been called into question as to why it is remains such a strong defining characteristic. This singularly, delineating descriptor has marked a difference that has established limitations on studies of diverse human interactions (Kirksey and Helmreich 2010).

Molly Mullin (1999) argues that although it was once commonplace to presume a binary opposition between humans and animals, there is scholarly evidence for this opposition to include more cultural and historical diversity than once believed. In many non-Western societies, there is not really a sense of a hierarchical ordering to the place of humans above animals and the boundaries are much more fluid, assigning animals, at times, the same value as persons. Social scientists often employ animals and multispecies ethnographies as "windows and mirrors" to reflect upon the lives of humans and human society which can help reveal much about ourselves and the way we organize ourselves (Mullin 1999).

For example, multispecies ethnographies focusing on pastoralism have demonstrated that this subsistence strategy is not only about specific kinds of relationships among animals and the environment, but among humans as well (Ingold 1980). Livestock owners in Lesotho are often deemed as irrational and traditional by development workers who are attempting to promote the commercialization of livestock. The development workers argue that the livestock owners do not know when to properly buy and sell their livestock. Among the Basotho, livestock are

considered to be men's animals and are tied to payments of bridewealth, while chicken and pigs are women's animals. The livestock therefore, bind men to their communities in ways that other kinds of property do not. The Basotho men also engage in migratory wage labor and so the exchange of livestock for any reason does not occur while they are absent. In this context, the livestock visibly verify his family, represent his own presence especially while he is away, and corroborate his place in the community (Ferguson 1990).

There is also the well-known work of the Balinese cockfight (Geertz 1972). Geertz reveals that:

> What sets the cockfight apart from the ordinary course of life, lifts it from the realm of everyday practical affairs, and surrounds it with an aura of enlarged importance is not, as functionalist sociology would have it, that it reinforces status discriminations (such reinforcement is hardly necessary in a society where every act proclaims them), but that it provides a metasocial commentary upon the whole matter of assorting human beings into fixed hierarchical ranks and then organizing the major part of collective existence around that assortment. Its function, if you want to call it that, is interpretative: it is a Balinese reading of Balinese experience, a story they tell themselves about themselves. [Geertz 1972: 26]

However, there has been other research on cockfights that challenges Geertz's arguments and adds more critical analysis as to the particular form of culture that is represented (Guggenheim 1994). Guggenheim studies cockfights in the Philippines and has found that cockfights hide the principles of Philippine social structure rather than spotlight them as Geertz argues for the case in Bali. He concurs with Geertz that a story is being told, but we need to ask why that particular story is told and how much truth is in that version. "In the Philippines, cockfighting reflects, reconstitutes, and distorts sociopolitical processes" and something similar might be occurring in Bali (167).

The theme of sociopolitical processes is again brought to the attention of social scientists through the examination of beekeeping and honey – hunting (Tsing 1995). Tsing studies the discourse and forms (often Western) used to describe and understand bee culture in the U.S. as well as Third World countries such as Indonesia. From different examples and case studies she argues that Western categorizations of bee behavior and bee species reflect such sociopolitical processes as governmentality and racism. She offers this example to demonstrate the ways in which Westerns have come to understand, classify, and describe bee behavior:

> One evening I was talking with some Meratus friends about bees; I explained that I had learned that a colony of bees had a queen – I used the word *raja*, "ruler" – surrounded by many workers. Raja locally refers to the head of government and the spirit of authority; it looms over more politically precise postcolonial terms such as *presiden* and *gubernur*. One of my friends laughed at me and suggested that my view of bees was derived from political propaganda spread by my government to make its subjects think that even animals accept hierarchy with obedience. I had to stop and think: As a cultural analyst, he had pulled the rug from under me. In imagining government, could I really tell the difference between bees and people? [Tsing 1995: 119]

Tsing continues to argue that this type of classification of the "culture of bees" has informed the way Europeans and U.S. North Americans practice beekeeping and interpret bee research. This example also testifies to the way Europeans treat bees as domestic rather than wild animals. This is because domesticity is "the dominant model of husbandry, and second, because bees have so many home-endearing qualities" (120). Conceptualizing the bees as domestic introduces contradictions between this line of thought and the actual behavior of bees as being so independent, a characteristic that is considered problematic to the beekeeper. Bees' independency is marked by the way queens will mate with multiple males without intervention from the beekeeper and the practice of "absconding" where entire swarms will leave the hive and begin a new one. This type of behavior does not conform into culturally designated ways of

being domestic. It is often thought that the categories of "domestic" and "wild" were formally cemented into human life with the rise of sedentary societies. With sedentary societies there become an intensification of animal husbandry and an increased application of different categories and distinct spaces of "domestic" and "wild" (Nading 2013).

Tsing's second example of how conceptualizations of bee behavior and culture reveal western ideas, specifically this time regarding those of racism, occurs when she recounts Whynott's descriptions of the events of "invading" bees:

> Sometime in 1984, a swarm of "African" bees – also known as killer bees – hitched a ride from somewhere in Latin America to Lost Hills, California. In June 1985, a machine operator working in a Lost Hills oil field saw bees kill a rabbit and reported it to the authorities. In an extensive official campaign over the next few months, twelve colonies containing African bees were found in the area – most discretely tucked away in abandoned drain pipes or college campus trees, but some in the managed apiaries properly reserved for "European" bees. The newspapers went wild. "Invader Bees Reproducing." "Bee Battalions Mopping Up Killer Bee Invasion." This time, briefly, the mulattos would be removed and destroyed for a Europeans-only California. "African Bees Won't Take Over Country Just Yet." Hitchhiking, border-crossing aliens who hide out in abandoned places and run from the restless gaze of the immigration authorities, who are capable of savage and unpredictable acts, and who reproduce much too quickly on U.S. soil: These are familiar U.S. stories of the non-European human outsider. [Tsing 1995: 113]

Tsing critically examines the discourse that is used to discuss the presence of an "other" group of bees, explaining that not only the categorization of different species occurs, but also that the specie differentiations need to respond to very humanly designed geographic and social borders. She makes this point in order to demonstrate how human cultural conceptions are embedded within not only the way we classify and identify nonhuman species, but also how we relate to them. The racist overtones of an "invading African" bee population reveals quite insightfully our own ideas of who or what *belongs* in this country.

John Borneman (1988) uncovers similar revelations when examining the construction of horse breeds in North America. He argues that breeders transfer their attitudes about race and nationality onto their classification of horses. Breeders perceive certain breeds such as Quarter Horse and Arabian as natural breeds and that their biological pureness must be preserved and continued. The Quarter Horse is said to represent the oldest and most aristocratic of American equine families (even though the Quarter Horse has only officially been a breed since 1940), while the Arabian is considered to be fiercely free-spirited. Thus, these representations are then transferred to the owners of those breeds and can alter and elevate a person's status or reputation (Borneman 1988).

Samantha Hurn's work with humans and nonhuman species (2012) has led her to examine the different names or "subfields" with which multispecies ethnographies have been organized. She delineates three different subfields, anthrozoology, human-animals studies, and animal studies and argues that anthropologists often feel most comfortable with the term anthrozoology because of the anthropocentric focus of the studies. For anthropologists, humans are prioritized and Culture has promoted humans to a level above other animals and the natural world. This encompasses the human-animal dualism and *objectifies* the animals as "things" in contrast to human *subjects* (Hurn 2012). However, not all anthropologists think this way[25]; it is just a generalized portrayal of the field of cultural anthropology, for it is not considered antithetic for biological anthropologists or archaeologists to critically examine the relationship between humans and nonhumans.

[25] For example there are anthropologists whose works deals more explicitly with non-human species such as ethnoentomologists and ethnobotanists.

The second subfield is referred to as human-animal studies and captures more of those disciplines that do not conceptualize an "Other" as a group to be positioned against a category of an "us". Within human-animals studies not only is the perspective of the human considered and examined, but that of the nonhuman as well. The third subfield, animal studies, is along the lines of queer studies and gender studies which have more political undertones. Animal studies highlight the perspectives specifically of the animals. She also argues that anthropology is comparatively well positioned as a discipline to examine human-animal relationships because much variation exists in regards to the way humans think about and engage with animals. For example, some animals are taboo to eat while others are deemed delectable. Some animals are considered to be gods while others are servants.

5.2.1 An ontological turn: the nature/culture divide

To understand the origins of why so many people perceive a strict separation between humans and nonhumans, it is necessary to look back to how "nature" has been recognized, organized, and constructed. When early thinkers began classifying life into different categories, they often created the concept of binary oppositions. Some examples are light/dark, male/female, civilized/primitive, human/animal, and nature/culture. The oppositions existed as if they were "fixed in place and relatively outside the bounds of individual negotiation" (Mullin 1999: 213). Even early anthropologists associated indigenous cultures with primitiveness, nature, and animality (Malinowski 2014, Radcliffe-Brown 1922, Turnbull 1987). Although they did recognize that the groups had cultures of their own, they were still considered to be rather uncivilized. Jean-Jacques Rousseau's theory of the "noble savage" categorizes the indigenous individual as "savage". The "noble" does not refer to an association with "civilization" because

the indigenous were still separated from this, but rather to the idea that "noble" signified a time when:

> Humankind realized its elemental potential for simplicity, integrity, and virtue, a point echoed in such contemporary movements as deep ecology. To this day, the "noble savage" is envisioned as living in harmony socially and ecologically. In romantic primitivism the "savage" is thought to be superior to civilization in terms of freedom, innocence, simplicity, generosity, goodness, purity, and peacefulness. Furthermore, "savages" are conceived as living in an egalitarian community with property held in common rather than privately. It is theorized that such an ideal or utopian condition of humanity thrived in a natural paradise during a golden age, and supposedly the remnants of this can be found in some extant traditional indigenous societies. [Sponsel 2012: 21-22]

It is through these oppositions that the concept of the "Other" emerges within the study of anthropology. The creation of the "Other' is a conceptualization of a methodology that can be used to frame how to study and observe humans that are specifically considered to be different than the investigator; a distinction that can refer to other humans or other species. The designated category of "man" was particularly important to the development of anthropology as a discipline (Foucault 1970). In Medieval Europe the differentiation between "man" and the "other" (encoded as nature and animals) was not always the norm and the people were more inclined not to categorize nature as separate from society. However, by the sixteenth century this thinking had dissipated into a mindset that organized nature apart from humans (Gurevich 1992). Humans still felt at the mercy of nature during this time, until scientists began to give society ways in which to better "control" nature. Only then was nature looked upon with an romanticism of nostalgia (Ritvo 1987). People realized however, that they were still often at the mercy of nature, but now with a little more control over what happens either before or after an event. This separation between nature and humans then extended to include humans separation

from animals as well because animals were thought to exist within nature and it is culture which sets humans apart from all that is nature.

One way this separation has been maintained was to associate oneself strongly with the divine (not everyone associated the indigenous with noble savagery). The clergy man Cotton Mather (1663-1728), preached this behavior adamantly and claimed that people who were not associating with the divine were cast down in society and compared to those species that inhabited the lower depths – the animals (Mullin 1999). "If humanity were closer to the divine, then the people who were thought to be inferior to others – women, the insane, the Irish, American Indians, Africans, poor people of any race or gender – were apt to be associated with animality, if not monstrosity" (Mullin 1999: 204). The relationship between most indigenous peoples as established as being one of animality and monstrosity enabled many colonists to believe that when they enslaved and exploited those people, they were following a natural path (Pagden 1982).

The divide between nature and humans and the perceived assignment of some people as being animals in a sub-human categorization influence how we understand and interact in our world, sometimes with disastrous results. For example, the prioritization of certain humans above animals also found its way into the marketplace. Not only do humans exploit animals in overt ways such as dogfights, but we also covet certain parts of the animal in which its life must be forfeited in order to obtain them such as in the fur trade and the ivory trade. The Europeans hunger for ivory severely impacted the lives of Africans because with the onslaught of white hunters game preserves were established that were off limits to African hunters and the natives became "poachers" on their own lands (MacKenzie 1988).

Domestication is another contentious issue and some individuals who are seriously concerned with the subjugation of non-human species view the practice of domestication as a disastrous event that has only further instigated the separation between humans and nature. They are appalled by the way humans have harnessed certain species to do our bidding whether it is working the land or curling up in our laps. However, there are other ways to think about domestication. Vinciane Despret examines the situations in which animals and humans have become attuned to one another. He argues that often human – animals interactions produce relationships where new identities are created and the participants learn to be "affected" by one another (Haraway 2008). This is what Haraway means by understanding human and nonhuman relationships through a lens of "becoming with". Humans' interactions with multispecies and the perceptions and understandings of them shape a bit of who we become. She refers to these as contact zones and argues that it is within the contact zones of multispecies that we can discard our ideas of human exceptionalism which have blinded us (Haraway 2008).

Not all cultures interpret a strong divide between nature and the way they live. For many, nature permeates their lives and would be difficult to separate even conceptually. Subcultures even within the United States have voiced their concern in regards to a compartmentalized lifestyle; a lifestyle in which people do not interact with nature on a deeper level. Humans may interact with societally approved nonhuman species such as horses, dogs, and cats, but other species such as spiders and roaches we promptly squash. According to these subcultures nature is often looked upon by others as either encroaching as in when a mouse scuttles across the kitchen floor, or as a resource to be exploited, or as a pristine section of the world set apart for our recreation, something to enjoy while hiking, camping, or joy-riding (Keith 1996). It is felt that these views are incredibly narrow and do not leave much room for embracing a more

interactive, connected, and responsible lifestyle involving multispecies. This is what a few subcultures went looking for: a deeper connection with the world around them and many found it through food and food production.

Earlier I discussed the ideas of food having a descriptive quality of "goodness" not so much as fulfilling a taste requirement, but rather crafted from how farmers interpret and use the myriad relationships involved in producing that food. Certainly, the specific distinction of "good" as embedded within the actual production of the foodstuff has existed since humans began altering food. However, since the Industrial Revolution the concept has taken on an additional angle in that it not only could it be sold as "added value", but more importantly for my study it could be conceptualized as differentiated against a faceless industry, an Other. For instance, with the Industrial Revolution food became mass–produced which in many ways was beneficial to a growing human population. Machines mixed, kneaded, stirred, and packaged our foods. There were machines that harvested food and even washed our food. However, there were many that felt the food lost something while undergoing these processes and perhaps more pointedly, the people also lost something. For many it was a loss of connection with the food: where it came from, how it was made, and how it got to their table. They wanted to regain what had been lost and many different routes were taken.

5.3 REINVENTING "CONNECTEDNESS" THROUGH FOOD AND FOOD PRODUCTION

5.3.1 Early endeavors

In the early 1800s, Sylvester Graham merged a romantic respect for "nature" with a disgust of processed foods – especially roller-milled, white bread flour. He also introduced the cold breakfast cereal that has come to grace so many American tables. "Grahamism", as his dietary rules and beliefs came to be known, advocated that good health could be attained through regular bathing, substituting water for alcohol, exercise, vegetarianism and abstaining from sexual behavior. These ideas were widely embraced during the 1800s and cookbooks were full of different Graham foods such as Graham biscuits, Graham bread, Graham pudding, Graham popovers and Graham pancakes. Graham's dietary reform became so widespread that there was even the creation of Graham Society, Graham hotels and boardinghouses. Graham also played a role in institutionalizing vegetarianism and in 1850 he, William Metcalf, William Alcott and R. T. Trall founded the American Vegetarian Society (Williams 2006). Graham's diet based on whole wheat bread, dairy products, fruits, vegetables, and "Graham crackers" was supposed to keep illness and insanity at bay and decrease sexual desire (Comer 2000).

The link between diet, religion, and sex was not uncommon. Mrs. Horace Mann taught that rich concoctions such as wedding cake are highly indigestible and should not be on any Christian table. The Seventh Day Adventists, founded in 1863, preached that "meat, spices, tea, coffee, tobacco, and alcohol were both unhealthy and immoral and that foods of vegetable origin paved the way to salvation" (Comer 2000:1316).

Dr. John H. Kellogg was a Seventh Day Adventist and he also pioneered to produce healthy and moral foods. Kellogg became head of the Western Health Reform Institute in Michigan in 1876 where he battled for vegetarianism and health reform for sixty years. He believed that a clean and healthy diet was one without spices, vinegar, mustard, pepper, cheese, pork, fine flour, tea or coffee. This focus on condiments was strong during this period and came from the large number of people suffering from dyspepsia. Butter, salt, and meat were to be used only in moderation. Meat was a problem because of its link to diseases such as trichinae. John Harvey Kellogg (like Graham) detested the practice of "bolting". Bolting began in the 1830s to make flour white. It removed the bran or outer casing from grains and therefore Kellogg explained also removed many of the nutrients. These outer casings which are the most nutritious parts are then fed to hogs and cattle (Williams 2006).

Susan Williams (2006) notes the importance of religious communities in shaping eating habits in the Victorian period. During the late eighteenth century and nineteenth century, many European religions utopian societies thrived in America such as the Amana Colonies in the Midwest, the Amish and Mennonites in Pennsylvania and the Shakers who began in England in 1774. The first Shaker community in the United States was founded in New York. The Shakers supported simple cooking which "reflected their ideals of simplicity and absence of ornamentation" Williams 2006:212). The Shakers opened their kitchens to the public, offering meals and other foodstuffs. In the early years of American Shaker communities, the Shakers maintained their English foodways which would have consisted of combining meat, grains, vegetables, and pastries. However, after 1837 there were a series of intense religious revivals which welcomed dietary reform. For example, all Shakers under the age of fifty were not

allowed to consume imported Chinese tea or coffee as well as swine flesh. The practice of only consuming foodstuffs produced by the local community was strongly encouraged.

5.3.2 The twentieth century

> The hippies of the 1960s were not just being silly or perverse but rather took on an ambitious and radical task: creating an alternative food system with its own ideology, staples and supply lines operationalized through aligning private action with planetary needs; distrusting chemicals and technology, re-sanctifying nature, community and tradition, debating the ecological and moral qualms surrounding meat, supporting small farms and organic methods, championing whole foods and believing that a better society might have to be built literally from the grass roots. [Belasco 2007:10]

The hippies began a movement referred to as "the counterculture" which still has followers and participants today. The counterculture often used food to express an interest in survival in the late 1960s such as promoting self-sufficiency in case the Armageddon came. There was not as much emphasis placed on worrying about the end of the world as there was pride in being able to provide for oneself *if* it did happen and so the self-sufficiency concept was more organized around growing one's own food (Belasco 2007).

There was also a strong desire to slow down during the 1960s and again food was used as a medium in order to achieve this. People who subscribed to this ideology held the value of preparing and cooking one's food above buying canned and frozen foods and the longer it took to make the meal, the better that meal was. If it took three hours to bake bread then one not only achieved a sense of fulfillment but also a spiritual experience of being connected with the energy which one would later consume. This slowing down was also in response to the fast paced life which much of the middle class complained about living as well as to the feeling of life going by too quickly. Pierre Bourdieu is cited to support this rising ideology for it was Bourdieu who

classified the bourgeoisie as being envious of the aristocrat's control over time, "that upper-class ability to carry on affairs with a sense of detachment, civility and ease" (Belasco 2007:52).

The discontent with the *modus operandi* of society's daily life during the 1960s and 1970s resuscitated many different interpretations from the past for the way life should be lived. Euell Gibbons' well known book, *Stalking the Wild Asparagus: Field Guide Addition* (1973) supplied a philosophical reason for the dissatisfaction the counterculture found in the agri-food system. He felt the reason some people turned toward a more self-sufficient lifestyle was centered on feelings of alienation and inadequacies of self-reliance. He described Western society as being one of abundance because it was easy for many to acquire the goods they needed as well as a host of goods they simply desired, but these material goods still left many with a feeling of dissatisfaction.

Gibbons argued that the lack of fulfillment people felt was because they would like to see themselves as a single entity, qualified for an autonomous existence. However, living in such a society as we do, many realized that it is impossible to live such a life because everything that they used was the product of an intense cooperation among millions of people and along many different lines of production such as processing, transporting, and distributing (Gibbons 1973). Gibbons argued that humans wanted to feel as though they were not just some clog in the machine of the industrial system and therefore felt alienated from their goods and the world within which they existed. People might love the luxury which society had brought them, but at the same time they feel detached from it and it was the feeling of disconnectedness which many responded to when they went in search of connections and associations in the form of food. Gibbons' assessment for people's feelings of alienation came from a world which provided goods and materials through a complex system of production in which no single individual was

responsible for the entire creation cycle of a good. Those that identified with this alienation responded by performing a quest, a search for wild food. The "wild" inhabited a space for this group of people in which they could distance themselves from the domesticity realm of their civilized lives.

The back-to-the-land movement of the 1960s and 1970s also reflected the mentality of self-sufficiency with an added element of disassociating oneself with the current circumstances of society. The reasons many people chose to go back-to-the-land rested on a spiritual, social, ecological, and environmental platform. It was during the 1970s when the largest numbers of back-to-the-landers fled their unfulfilling jobs and homes in crowded cities or imitation suburbia and headed to the country. Many described their lives as a "meaningless existence, content with frivolity and mediocrity and consumed by a nervous tension which we no longer found bearable" (Agnew 2004:6). The back-to-the-landers often attributed these feelings of alienation and restlessness with the state of the world. Inflation had grown to 14.1 percent and a new home would cost on average $42,600, but the average person only early $11,800 annually. Many came to the conclusion that the American capitalist society was about to crumble, so going back-to-the-land was linked with survival. To these people, survival was more about having the courage to escape the rat race with a soul and live a better life disassociated from their previous one.

The environmental concerns of the 1970s also served as an impetus for families and friends to leave the mainstream "bad guys" behind. Factories were dumping toxic wastes into rivers which caused problems for people, animals and land. Pesticide use was soaring as more and more farmers depended upon the chemicals. These same farms became larger and larger and thus increased the amount of pesticides discharged into the air, soil, and steams. Preservatives, at first seen by many (but not all) as a great way to store food especially during and after World

War II, were now viewed as causing health problems or unrest in an individual's view of natural foods (Agnew 2004).

Going back-to-the-land was going to remove all of the spiritual, economic, social and environmental problems people faced on a daily basis as they headed for the country. This allure to the country was based on an almost magical perspective of what the country was. In general there was a shared veneration of the countryside. The imagery of the countryside consisted of "corn swaying in an autumn breeze, fireflies glowing at dusk, the smell of maple logs burning in the wood stove, and the raging snowstorms pounding the side of a cozy house" (Agnew 2004:9). For those with courage, the allure was strong enough to leave all the stresses and problems of mainstream life and relocate to this enchanted place.

Courage was also a strong theme in the back-to-the-land movement for it pulled an ethos from history. The great Westward expansion of pioneers inspired many. The courage that these strong, poor, self-reliant folks had seemed to convince many that they too could resurrect the soul of pioneer life. They learned of the Old West and pioneer life from school, literature, poetry, songs and television. In the 1950s popular television shows were *The Lone Ranger, Bonanza, Rifleman, Gunsmoke* and *The Big Valley.* Not only were the echoes of the pioneer and self- sufficient spirit in our nation's past, but there was also a long held admiration and respect for the simple, agrarian lifestyle. Thomas Jefferson, a founding father, strongly advocated for the high esteem of farmers and craftsmen contrasted with the evil forces of progress and industry. He believed and voiced that "America's virtue depended upon farming as the only true from of wealth. Farms fostered self-sufficiency, and resourcefulness, and therefore nourished the personality type needed in a democratic political system" (Agnew 2004:86). For many the back-to-the-land movement resuscitated the essence of American consciousness.

Helen and Scott Nearing are well known for their back-to-the-land feat. Although they first left the everyday grind in 1932 long before the movement became popularized, they served as key inspiration and mentors to countless others 30 years later. The Nearing's wrote a book relating their experiences of withdrawing from society as they knew it. In this book they also explained their purposes for aspiring to a new life (Nearing and Nearing 1970 [1954]). The world in which they left was overwhelmed with the effects of the depression and unemployment. Their worldviews and philosophies differed drastically from mainstream thought so much so that they were not allowed to teach in schools or write or in newspapers.

> We left the city with three objectives in mind. The first was economic. We sought to make a depression-free living, as independent as possible of the commodity and labor markets, which could not be interfered with by employers, whether businessmen, politicians, or educational administrators. Our second aim was hygienic. We wanted to maintain and improve our health. We knew that the pressures of city life were exacting, and we sought a simple basis of well-being where contact with the earth, and homegrown organic food, would play a large part. Our third objective was social and ethical. We desired to liberate and dissociate ourselves, as much as possible, from the cruder forms of exploitation: the plunder of the planet; the slavery of man and beast; the slaughter of men in war, and of animals for food. We were against the accumulation of profit and unearned income by non-producers, and we wanted to make our living with our own hands, yet with time and leisure for avocational pursuits. [Nearing and Nearing 1970:14]

The Nearing's are a special example mostly because of their dedication to living back-to-the-land, but also because of their unique success at achieving that lifestyle. Many people who went back-to-the-land failed miserably and went back to city and suburban life only after a few short months or years. The allure of detaching from a disconnected world and uniting with the more connected world of nature inspired many to quit their jobs and move into the middle of the woods. However, many were completely unprepared for what living outside of the world they had known would be like and failed miserably at that lifestyle.

The counterculture movement as well as the self-sufficiency and back-to-the-land sentiments have not been frozen in time within the 1960s and 1970s, but rather continue to exist today. Jon Allen discusses "foods of enlightenment" as a way to describe how certain consumers are less interested in weight-loss and instead focus on holism and emotion when selecting which foods to eat (Allen 2012). A significant part of the population relies less on nutritional values and more on concepts of wellness and the pursuit for identity. I have heard many stories from the farmers in my study that echo the philosophies of these movements and sentiments. Some of the farmers in my study have direct goals relating to the desire to reestablish and reinvent a "connectedness" with their food. The perspective that our society has become disconnected from what we eat and how it is grown, made, and transported is common among the farmers and again regardless of how the farmers identified along the conventional-sustainable spectrum. Among the farmers in my study, one of sustainability-aligned farmers related to me stories of her parent's experience with the back-to-the-land movement which included her earliest experience with it:

> My parents were homesteaders there. They moved there from California so I was born on a piece of land that they were working on clearing. I was born in uh what was supposed to be a chicken coop but there were no chickens in it at the time and that's about it. It was very, very rural even more rural than here in West Virginia where we live now.

This farmer also explained to me how she and her partner ended up farming for a living and how her father's farm played a role in this. When she was older and had finished school she spent a couple of summers in rural Appalachia, but both she and her partner, "were kind of feeling that we were done with being in the city, and I had fallen in love with living rurally". When I asked a conventionally-aligned farmer why she began farming, she said:

> It's in my soul. I think it has to be the satisfaction of being out there and working with the soil and understanding the soil and being able to look at a plant and the soil together and know that things aren't right that something needs to be done and figuring out what needs to be done and then picking the first tomato and tasting the fresh green beans and the first salad of spring, oh my goodness… I cannot wait, laughs. It is just a sense of satisfaction and connecting with the earth and the natural rhythms and cycles, reading your environment.

I also asked then about whether her partner prefers his off farm work to the farm work and she told me that, "he was just telling me this morning and he was like I am so sick and fed up with all of the nonsense that goes on over there [his job] and if I could walk away today I would". Another conventionally-aligned farmer discussed with me why he started farming and explained it like this:

> In the summer I went to my granddad's, we used to live in another town and, it was a more urbanized area, couldn't hunt, couldn't go out and ride your bike very much, but in the summertime at my granddad's I could do all that run, hunt you know a lot more freedom, lot less population. You can walk outside here and you don't have to worry about anything…

I spoke with another sustainability-aligned husband and wife farming team and talked with them about their reasons for farming. They talked to me about how all of the processed foods make them sick and the husband told me:

> I cannot even eat any of that processed food, the regular food, you know that junk food anymore. It just makes me so sick. People have no idea what that food is doing to them. So that is basically pretty much why I am doing all of this farming.

This farmer also included a self-sufficiency mentality within his explanation:

> But then there's always that other thing in my mind that says well what if the United States collapses, what happens if the economic bubble bursts? I mean everybody's like selling these little credit cards with a little gold chip inside, this is the new currency, you know so if the dollar collapses, the Euro collapses you know this is the new currency – gold, pure gold. And I'm like no, I raise my currency because you know if I have this farm here that produces and this farm is

> totally sustainably without any input from fertilizers, without any input from you know, I'd have to start plowing by hand and make it a little smaller, but if something did happen we could survive here where most of the other people out there have no idea where their food comes from and how to raise their food.. And so we're healers and growers of food.

All of these examples from the small farmers have sentiments that echo those of the counterculture during the mid-twentieth century. The attitudes and ideals that sprung up during that time continue to permeate into parts of our society. At times they manifest so strongly in certain individuals that those people carve out a lifestyle that they feel resonates with their perceptions of what they would rather our society exist as. For these people it is about connecting with one's food, but in such a way that they design their whole lives to work toward that effort. Instead of fulfilling their desire to have a closer relationship with the food they consume by purchasing it from local farmers' markets or participating in CSAs, they orchestrate their personal and business lives in an effort to not only consume the connection via eating the food, but to also produce the connection through growing the food. Farmers hold a unique position with reinventing the connectedness within our food system because they both consume and produce the connection.

The element of producing the connection is critical to understanding how farmers understand and value the land, animals, and people tied to their farm. These two elements, how they view their production of food and how they see the relationships on the farm are both based upon a sense of connectedness. The farmers interpret the farm as a system of *interconnected* organisms and they interpret their labor as a *connection* to the food they eat. In industrialized economies, most people except for perhaps vegetarians do not think much about the animals they eat; "people eat meat, not animals" (Mullin 1999:210). However, the small farmers' lives are strongly built around the concept of being more connected with the lives of human and

nonhuman organisms around them; whether it is the animals they are raising, the soil they are tending, the potatoes they are eating, or the family, friends, and customers they are feeding. When living this way and holding this type of worldview, the interactions of farm life that may seem unimaginable to non-farmers are not only perfectly common, but also enhance the kind of connections they have built. I offer three stories from different farm families which help to illuminate this.

5.3.3 Chicken butchering: learning to value life by taking it

It was a hot summer day, I cannot emphasize hot enough. Joe and his family, who are sustainability-aligned farmers, invited me to their farm to help them butcher chickens. He told me that if I was going to study farmers then I definitely needed to see this. I had not been to Joe's farm before. It turned out that two of their farmer friends, Sarah and Eli who I had been working with already were headed over to help butcher and so Joe arranged for me to meet Sarah and Eli and follow them to the farm. We met at a little church at 8:00 in the morning and I followed them off the two lane highway onto a dusty, dirt road that wound in and around the beautiful Appalachian foothills. When we pulled up to the farm, I was surprised to say the least. It was picturesque – an old, but fixed-up wood frame farmhouse, a big red barn, an old stone springhouse, several other outbuilding, tractors, and a couple of cats and two dogs running around. It was surprising to me because I knew that Joe and his wife, Emily, were young and I guess I didn't expect such an operation.

When we got out of our cars Joe and Emily had everything set up already. There were a couple of long tables arranged to make a "U" shape, a garden hose, several coolers with tons of ice, and a little framed wall with four cones hanging down from the top. Sarah explained to me

that the tables were for processing the chickens and the wall with the cones was for the actual slaughtering of the chickens. Joe and Emily came over to greet us and after a few minutes of asking me if I was sure I was ready we were assigned to our stations. I would be working with Sarah and Eli at the processing table and Joe would do the actual slaughtering and Emily would run around between us handing us chickens and making sure Joe had everything he would need, oh plus take care of the children who I had not met yet.

The chickens were passed to me after they came from Joe who was slaughtering them and then to Eli who was removing the legs. I was set to the task of removing the crop, which is in the esophagus where initial stages of digestion begin and sometimes still contained bits of food and preen gland, which is located at the base of the chicken's tail feathers (which had already been removed, of course) right near its rear end. It secretes an oily, waxy substance that the chicken needs to help keep it waterproof. Most of the time the preen gland is yellow and appears "discolored" and is honestly stomach-churning to the less experienced.

After doing this for about three hours, we had accumulated quite a pile of guts at the end of our table and the bees and wasps just loved it while they hovered and buzzed all around us. The smells from the blood, entrails, and guts had permeated the air and filled my nostrils, head, and stomach with the intense, beastly smell of raw flesh baking in the sun. I was beginning to feel lightheaded and dizzy and a bit embarrassed because none of the others seemed the least bit phased. I was rather confused myself since I had helped harvest a deer during hunting season, skinned it, butchered it, and consumed some of the steaks only two hours later and wasn't the least bit squeamish from it. I told myself that it bothered me today because we were doing so many, but Sarah advised me to walk around a bit and perhaps go chat with Joe and see how he was coming along.

Following a brief walk and a long drink of water, I made my way over to the slaughtering area. Joe was busy taking chickens out of the crate[26] and placing them one at a time into a cone. They went in head first so they were upside down in the cone and their head as well as a bit of their neck stuck out of the bottom. Then Joe would make a clean, single slit to their throats and let them "bleed out". He explained that, "this was the kosher way of slaughtering and I prefer it because it is fast and one of the restaurants that I sell the chicken meat to requires kosher practices. So I kill two birds with one stone." Joe winks and I laugh at his joke. He then places the bird in the scalder in order to remove the feathers. Finally, the bird goes to the processing tables with the other farmers.

As I stood there watching Joe work and listening to him talk, I noticed his appearance. He had blood on his hands. He also had some blood on his shirt and pants from wiping his hands on them. His skin also glimmered with sweat from the hot, sticky summer day. He must have rubbed the sweat from his brow at some point because he also had a bit of blood on his forehead. As we talked about farming, food production and chicken butchering, he put a few more birds into the scalder and upon doing this a single, solitary feather fluttered up and into the air then promptly stuck itself to the blood and sweat on Joe's forehead – I don't believe he noticed and he didn't skip a beat in our conversation. Rather than being further grossed out as I was pretty much already, I began to really see what the farmers were already beginning to try to explain to me. This is a part of the connection so many of them talk about. It is about being a part of how

[26] The chickens on this farm enjoy roaming the yard and pastures during the day and so need to be caught and put into crates before slaughtering and butchering. This cut the time down for having to try to catch them when it was their turn. So Joe and Emily caught the ones we were going to butcher before we got there and put them inside crates so that Joe could easily access them when it was time.

the chickens were raised, what they ate, how they slept, how they got along with other chickens, and being a part of how they died – a very direct part.

Joe talked to me about how there are different schools of thought concerning killing a living organism, specifically what we would identify as *killing* an animal rather than a vegetable like cutting a green pepper from the plant. Some people believe that killing something sets you apart from you and disconnects you from it. Many people cannot imagine killing an animal. They feel it is inhumane or barbaric. Some people can eat meat, but cannot kill it. We are omnivores and we eat meat and we have for a long time and if we eat meat then we need to kill to get the meat. Joe made a purpose to say that he doesn't think that everybody that eats meat should be able to kill it, but for him it actually brought him closer to the animals because he could feel how precious life is. One of the schools of thought is if you can kill something than you do not value it, but another one is that once you do kill something, you are more connected than ever to life and the gift that it is. Life can be over in an instant, so make the best of what you have while you're here. Joe and his family try to live this way every day and they try to give the life on their farm the same respect. He doesn't enjoy killing, but he knows that if he, his family, friends, or customers want to eat chickens than someone has to kill them and he feels he gives the chickens a good life and ends it as quickly and as painlessly as possible.

While watching Joe, Emily, Sarah, and Eli labor in the heat of the day talking casually among themselves and sometimes remarking on a nice looking bird (which of course did not have feathers or a head for that matter), it began to really sink in how differently they saw their work than what is often pictured on billboards, in storybooks, or on television commercials. What the non-farmers, the outsiders, see are only the "pretty" aspects of farming: the green, rolling hills; new spring lambs and calves; clean, brushed cattle; and rows of weed-free carrots.

Many people have a harder time with understanding how those animals and vegetables actually get to our plate. Yes, there is a lot of media surrounding the recent "Farm to Table" and "Get to Know your Farmer" and there are wonderful tours set up for consumers to visit farms and have dinner in the yard sitting at a table with white linen cloths[27]. However, I have yet to hear of these tours including a visit to the butchering area if the butchering is done on-farm or if off-farm then to the USDA inspected facility.

People are learning more about where their food comes from, but there is still a huge part of it from which they remain distanced. The farmers that I spoke to about this told me they think it is because most people are not ready for this. It is harder for them to understand and they do not see it the same way. It might be a little like indoor plumbing. People know they have indoor plumbing, they know they have a toilet although they may not know exactly how it works, they know they can use it and flush waste away. If there is a problem, say a really bad clog, then they can call a plumber and a plumber can handle the snake in order to unblock the clog. Sometimes it can be very, very dirty and smelly work. That doesn't mean that anyone who wants indoor plumbing with a functional toilet should be able to work in the muck and putrid smells of waste. Does it? Although it should remind us of the respect that these people should receive.

I returned to my job of removing the crop and preen glands. By now the grass around us was covered with bits of blood, guts, entrails, and feathers. I talked with the farmers about their work and listened when they talked to each other about specific challenges of farm life. I heard

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[27] These tours are not aptly named "Table to Farm" in which people can sign up for a tour of the farm and eat a dinner that was mostly produced on that farm. The tourists and the farmers then all sit down together outside (weather permitting) at a table covered often with beautiful decorations of tablecloths and flowers. The tourists do not actually see how the meal was prepared and how any meat in the meal may have ended up in there.

the screen door of the old farmhouse slam shut and looked up to see Joe and Emily's little girl running up the little hill from the house to where we all were working. She was wearing blue jean shorts and a pink, flowered tank top. She walked around for a little while and then asked when it going to be her turn. We all laughed and smiled at her. While her mother discussed the topic with her, I looked down at her feet – she was shoe-less! Her little summer feet had bits of blood on them, feathers stuck to the blood, and when she shifted her weight from one leg to the other, a bit of chicken guts squirted out between her toes. This was not your typical little girl. After her mother told her that she could help later, she skipped over to the driveway where one of the dogs lies lazily in the sun and she knelt down to pet him.

My earlier ideas of what the farmers had been explaining to me about seeing the farm differently than many non-farmers seemed to jump out at me with the image of guts squishing out between little toes that had remnants of purple nail polish on the tips. To them, it is not disgusting; *it is the farm*. They understand that not everyone appreciates that all of this is part of farming, but the small farmers appreciate it and recognize that in order to produce that connection with one's food, one also produces a connection with different ways of knowing and interacting with the world around them.

5.3.4 Is cow manure just grass and water?

The children of farmers are growing up with similar experiences, knowledge and worldviews concerning "connectedness" and what all farming entails. Just as with Joe's daughter's indifference to chicken guts, I witnessed other children interacting with life in ways that also demonstrated their upbringing of connectedness on a farm. Later that same summer I had the opportunity to help with a cattle drive. One of the county's well-known cattle brokers, Rebecca,

had organized it and asked if I wanted to come along to see how it works. We met at a restaurant in the county seat and I left my car and hopped into her truck. She explained that we would stop at two farms to pick up the cattle.

The first farm, which was mostly a cattle farmer, is where the smaller trailer is and the cattle would be loaded into that trailer. We met the farmer, Jim, at one of his barns and he and the other farmer who was participating in the cattle drive, Ben, were talking about which group of cattle to take first. Jim and Ben, who are both conventionally-aligned farmers, left to get the first group and asked us to wait at the barn. Ben's young son, Nicholas, and nephew, Tony, were there too, both of whom were in grade school. The two boys took me around the barn and showed me all of the equipment and explained the function of each piece and I learned all sorts of things from them. For instance, Jim uses a tedder to help aerate his hay which helps to dry it and he wraps his big round bales in plastic because this way he can take more green hay which is higher in nutrients for his cattle and the plastic will help keep it from spoiling and molding.

When Jim and Ben came back they told us to jump in the truck and follow us down to get the last group which Jim already had in a pen down over the hill. When we pulled up Ben was backing the truck with the large cattle trailer attached to it up to the end of the pen. Then Jim hollered and whooped until all the cows had climbed into the trailer. The cattle drive seemed simple enough to me and we then drove over to Ben's farm to load up some of his cattle.

Ben's son, Nicholas, had been begging his father to allow him to help with the process and so far Ben had told him no, but now that we were on their home farm, the luck swung the other way and Nicholas was allowed help. I asked Tony if he was going to help also and he just shook his head. Nicholas then told me that Tony is not from around here, he is visiting from Florida and is not used to this stuff. The boys laughed. Once Ben had the trailer lined up with

the pen, Rebecca, Tony, and I all walked over to be closer to the loading and Nicholas was right in the middle of it.

I noticed that Ben and Jim had cattle prods this time and Nicholas was also given one. I asked Rebecca why they were using them and she told me, "Yes I know it seems harsh, but it's better than one of the cows falling and breaking an ankle or leg." I didn't know what she meant at that time, then all of a sudden the doors of the trailer opened and the men were hollering and whooping again. Only this time not all of the cows moved once they got on the trailer and Rebecca told me to watch that part specifically. Ben and Nicholas ran over to that section of the trailer and prodded the cattle so that they would move forward. Rebecca explained that while Jim is moving the cows from the pen into the trailer some of the stop, maybe because there is already a level of cattle below them[28] and they feel uneasy. While some of them stop, the others keep coming from behind and push into the stopped cattle which create the chance for injuries. "Remember," Rebecca told me as she saw me flinch when the men started prodding the cattle to move, "the cows are much bigger than we are and have so much more weight and the cattle prods are adjusted to nudge them, not shock them painfully."

We watched as the men continued to work to load the cows as safely as possible. Then we heard a noise and I thought maybe Ben or Nicholas laughed, but they kept working. When all the cattle were loaded Ben and Jim secured the doors and Nicholas turned to walk back over toward us. As he turned toward us, I noticed something was not quite right about his shirt. As he came closer, I realized that he had cow manure running all the way down his front! Tony was laughing so hard he could hardly stand it and once Nicholas approached us, I noticed he had a

[28] This particular cattle trailer is a double decker where the bottom level had been filled first at Jim's farm, then a ramp comes down and the cows from Ben's farm can run up the ramp and fill the second level.

huge grin on his face. I asked him what in the world happened and he explained to me, very calmly, not at all like someone who had just been covered in fresh cow manure, that the cows get close to the walls of the trailer and the trailer has open spaces in it for fresh air. While Nicholas was leaning closer to help move the cows along one of them backed up against the opening and let loose all over his chest. I think I just stood there staring at him, probably with my mouth open because he then turned to Rebecca and she told him there were some paper towels in the truck he could use.

I walked over with the boys to watch them clean up the manure which by now was beginning to have its own individual smell separate from the considerable amounts coming from the previously inhabited cow pen. Nicholas opened the door, fished out the paper towels and began wiping his shirt and pants. He managed to get the gobs off, but I believe he just smeared most of it into the fabric of his clothing. He must have known this was what I was thinking because he looked up at me and said, "Geez, Mandy, it's only grass and water."

I thought about this explanation of cow manure being "just grass and water" and after a while it seemed to fit. Yes, there were lots of other things in it like bacteria, but from a different perspective, one that many farmers share, grass and water is not "gross". The perspective instead reflects the ways in which manure is thought of on farms. Manure is quite useful for farmers and for many different cultural groups around the world. Cow manure, or cow dung is often used for fertilizer, in fact it is the preferred fertilizer of the small farmers in my study. They favor cow, chicken, or horse fertilizer over chemical store - bought fertilizer because they feel it does a better job and often times they can get it from their own farm thus improving their on-farm input to off-farm input ratios. However, in other parts of the world, manure is used for fuel, to generate electricity and heat, to repel mosquitos, and as a mortar to build dwellings (Waltner-

Toews 2013). Children and women will often make dry dung cakes to help prepare the materials used to construct the dwellings. All over the world, people have a different relationship with dung or as we call it manure and the small farmers of Appalachia also have a different relationship with it. This is because people see and understand manure differently. Often those people who do not have a use for it and do not come into much contact with it will have a very different idea of its "usefulness". In fact, they will most likely flat out not want to be near it let alone be shoveling it, spreading it, or having it smeared on them.

Manure is not the only useful by-product that farmers utilize. Another farm family in my study explained to me that they use their own urine to help fertilize their soil. I knew farmers used manure, I had seen that even before I began this project, but urine was a new one. These particular farmers are vegetable farmers. They capture the urine in a special little "out-house" and then use it to fertilize the soil. They also "water" the vegetable plants with it, but it's not like they are eating the vegetables or selling them to customers with urine still on them. Human urine contains nitrogen, phosphorus, and potassium all of which are essential plant nutrients. Usually these nutrients are mined from the earth or harnessed from the air and manufactured into chemical fertilizers which are then sold back to people. When using urine on the farm, people actually produce the fertilizer themselves which allows them to give the nutrients back to the earth, something that has been termed "pee–cycling'.

Once these farmers introduced this practice to me, I began to research it a bit more and found that "pee–cycling" is happening all over the world. Research experiments being conducted at Rich Earth Institute in Vermont are testing the effectiveness of urine as replacing chemical fertilizer and found that a farmer who had applied urine to her hay fields in 2013 had yields that dramatically increased. Urine is sterile so using it as a fertilizer on farmland is

considered to be safe. However, when collecting the urine from humans there is a possibility of it becoming contaminated so the Rich Earth Institute is also experimenting with different sanitation methods (NPR 2014).

The University of Kuopio in Finland is also doing research on urine as an alternative to industrial fertilizer. The use of urine to help nourish plants can also reduce energy costs diverted for sewage treatment. The University of Kuopio conducted a study with urine fertilized beets and found that those beets were 10 percent and 27 percent larger by mass than those grown with industrial fertilizers. A scientist at the Swedish University of Agricultural Sciences has been studying urine recycling for over 15 years. He explains that not only does our urine contain the nutrients that plants need to thrive, but it is also already in the correct mineral from that plants can absorb (Grunbaum 2010).

Not only is pee-cycling occurring around the world, but it has also been used as a fertilizer for a lot longer than the experiments in Sweden over fifteen years ago. At least as early as 1867, it was already known that urine held more nutrients than manure and a scientist was already working to use it to produce a fertilizer that could be used in farming. In the nineteenth century, in Denmark, urine was used as a laundry detergent to wash clothes (Schonning 2015). By 1573 in Japan, separating urine from feces was already a common practice and business. Once separated the black water (urine that had been mixed with solid waste) was referred to as night soil and used as a fertilizer for agriculture. Night soil was still used in villages, towns, and cities until the 1960s when chemical fertilizer began to replace it. American culture was an influence as well because of the culture's perspective that human waste should be separated from daily living conditions (JSC 2015).

Figure 16: The effects of urine fertilizer on lettuce. The lettuce on the left has been treated with urine. Photo Credit: Wikimedia Commons.

After I had done some research on "pee–cycling" and discovered it is not as off-the-wall as it first seemed to me, I actually was a bit more surprised that more of the farmers in my study were not doing it. It is more work for the farmer, of course because there needs to be a separate toilet, but the farmers who first told me about this seem to be all about toilets. What I mean is in addition to the urine collecting facility, they also have an outdoor compost toilet. They originally thought they would be using it for the volunteers and interns who come to work on their farm, but they have found that they are using it quite a bit when they are outside working.

They found that it saves them time from having to walk back to the house from their fields. They also like the idea of not having to use water to flush and having less of an impact on local sewage treatment plants.

5.3.5 Raising livestock includes checking chicken fertility!

The farmers have built connections with food through more ways than slaughtering livestock and vegetable-urine partnerships. They have also built connections with the animals through the ways in which they care for them. Yes of course, there is the recognition that well-cared for animals are healthier and can then also be more profitable and the farmers do absolutely recognize this, but they feel a responsibility to the life of the livestock and an appreciation for it. All of the farmers in my study, except perhaps one[29], have expressed to me that the practices they have chosen to raise their animals, whether it is rotational grazing or worming, have been chosen because they feel it provides for happier and healthier animals and it fits within their farming philosophy. There is an overwhelming desire of wanting to provide good care for the animals based upon a deeper level of connectedness that the farmers strive to operationalize on their farm.

Early on in my research a wonderful, sustainability-aligned family had taken me under their wing and opened their lives and farm to me. They introduced me to lots of other farmers,

[29] This one particular farmer explained to me that he chose his management operation almost exclusively because it would be more profitable. This decision however, does not reveal any type of indifference toward the animals or fields because he explained that he grass-fed his cattle not because he has a problem with grain, but because he could make more money. To him, grain and grass would have been equally nutritious for the animals. I will discuss more of this in Chapter Six.

fed me amazing meals, and served as a wealth of information not just on farming, but the area as well. They work a diversified farm consisting at the time of cows, chickens, goats, and vegetables. They involved me in several different farming projects including helping with the design and construction of a hoop house for the chickens during the winter because as they explained to me, "Many people don't realize that chickens need a place to keep warm in the winter as well as a safe and enclosed place to sleep at night." There are a few different options for housing chickens such as coops, hoop houses, and mobile coops. The hoop houses are also called high tunnels and have been largely promoted in the region not only for chickens but also for vegetables. Using a high tunnel for vegetable production extends a farmer's growing season by at least two weeks on each end, meaning two weeks later into the winter and two earlier in the spring.

The hoop house I helped with was for the chickens this time and we started it in the fall and had it up and with chickens roosting in it before the first cold snap. We also had to figure out how to bring water to the hoop house because the farmers knew that they did not want to be lugging buckets of water every day from their house. This was accomplished through a system of hoses and the installation of a pump near the hoop house. Once that project was completed, I figured there was not much else to be done with chickens except feed them, check their water supply, and make sure they stayed warm over the winter. Wrong. Sarah, one of the farmers who came with me to Joe and Emily's for the chicken butchering and the matriarch of the family who had taken me under their wing, explained to me that there are lots of things we need to do with the chickens. One of which is checking their fertility, she told me with a smile one afternoon and apparently I was going to learn how to do this.

Sarah called me one morning and told me that tomorrow would be the day for me to learn how to check the chicken's fertility. She explained we would need to wait until dark because it's best to check chicken fertility when it is dark and so I needed to be at the farm at 9:00 pm. My interest was piqued to say the least, "Why would this need to be done at night?" I got to the farm a little before 9:00 pm and it was definitely dark and the night seemed still. After an initial greeting and hello to the rest of the family, Sarah and I walked over to the hoop house. It was a winter night and the snow that had fallen the previous morning still covered the ground, fields, and barn roofs. The hoop house is a little ways from the house, a short but invigorating walk through a small pasture and then a small meadow. The stars twinkled brightly in the darkness and the moon shone enough light so that with the reflection on the snow we did not need a flashlight.

On the walk, Sarah ended my suspense and explained to me that we do this at night because the chickens will be roosting and it will be easier to pick them up and "examine" them one by one. During the day they are walking around all over the place. This will help us keep track of each one that we need to check and take less time. Mystery Solved! Made good sense too as seemingly "old wives tales", traditionalist farming, or native lore often does. I was reminded of another anthropologist's story of canoeing in the Pacific Islands. The anthropologist wanted to go look at one of the islands in particular, but the Islander who was acting as her guide told her no one goes to that island. When she asked why, the Islander told her because that island gives people nightmares. Intrigued by this explanation she looked into the matter further and later learned that the island has an uncommonly high rate of mosquitos. In this particular region, mosquitos can pass on Dengue Fever and one of the symptoms of Dengue Fever is

feverish headaches and some report hallucinations. Some may refer to hallucinations as nightmares.

As we got closer to the hoop house, Sarah motioned to me to be quiet now and we approached the door in hushed tones. We walked in and all the chickens were roosting restfully, one next to the other on the make-shift roosting poles we made out of tree branches. They looked warm and snug. However, the smell of chicken, chicken littler, and chicken feed in an enclosed, small area after a brisk walk in the fresh, winter air along the breathtaking Appalachian Plateau's farmland is quite stifling to say the least, but I don't think that Sarah noticed. She commented on the soft coos we heard every so often and said things like, "Hi girl, how are you this evening?" and "Oh, we're sorry to wake you, but we need to check in on you". I tried to act like the smell wasn't about to make me pass out and followed Sarah to the other side. She explained that we would start on this side and I could just watch her the first couple times until I got the hang of it.

While I was watching Sarah explained what to do and that I could hand her the little bands so that we could mark the chickens that have been checked. She picked one of the chickens up and turned her over, took two fingers and placed them along her pelvic bones, the area where the eggs come out, and said she is doing well and asked for the band. We placed the band around the leg and moved over for the next one. She picked this one up and turned her over and this time when she placed her fingers on the bones she explained to me that she was checking to see how much the bones have separated. The measurement of at least two finger widths is what we are looking for to ascertain whether the chicken has been fertile.

Apparently chicken fertility does not mean exactly what I thought it meant. I was taking my translation more from a human perspective in that whether the chicken *could* have eggs or

chicks. However, what we were looking for specifically was whether the hens *have been* laying eggs. This explains why we did not have any fancy instruments, test tubes, or needles. Still the two-fingered trick is pretty neat. The reason farmers check for chicken fertility is because there are two different types of chickens. There are the laying hens; these are the chickens which are raised in order to produce chicken eggs for sale and consumption. The second kind is referred to as broilers or fryers; these are the chickens that are raised for meat. The laying hens that are not laying eggs as much as the others are laying eggs can then be used as broilers.

I also noticed that as we did this Sarah checked the chickens all over for other signs or symptoms of any kind of illness or discomfort. Several of the chickens were missing feathers on their back and so I asked about this, thinking maybe they were sick. She asked me if I've ever heard of a pecking order. Sure I told her, that's when there are a few top management folks and they sort of keep those below them in line and those below them have fewer privileges than those at the top. She just looked at me until I realized where that kind of language came from – the chickens! Wow, okay so there are a few "top-dog" chickens in charge of the flock and they let the ones below them know it by pecking them. Sarah explained that sometimes this can happen when a flock gets too big, but hers is pretty small right now and so sometimes chickens just do this. She was not worried about it; it was part of chicken "culture".

We continued on through the hoop house picking up the chickens, checking their fertility, examining them for any other ailments, banding their leg, then setting them back down. It wasn't long before I was checking and banding and we worked much faster with each of us taking a bird. When I turned one chicken over in my arms I noticed some really unpleasant white and gray gooey substance smeared around her. I asked Sarah what it was and she laughed and told me that chickens go to the bathroom too. Oh geez, more manure, I thought! Sarah

explained that sometimes it gets stuck on their rear end, but it's nothing to worry about, it washes off. I was still unsettled and hesitant to how I was going to check this one. I sighed and fondly mumbled under my breath, "farmers…"

Figure 17: Multi-colored eggs from free range, grass fed chickens. Photo Credit: Amanda Zickefoose.

Figure 18: Chickens inside the hoop house. Photo Credit: Amanda Zickefoose.

Figure 19: The farm on a winter evening. Photo Credit: J Reef.

6.0 THE CONSEQUENCES OF SUSTAINABILITY RHETORIC

In chapters 4 and 5, I demonstrated how the small farmers in my study, regardless of which label they identify with, have employed many of the same sustainable farming practices, and I argued for a differentiation of practices based upon variation along a *spectrum*, rather than an application of stale, trite labels ("sustainable" versus "conventional"). I have also revealed how these same farmers share an interpretation of the farm as an interrelated and interdependent system of multispecies elements. This interpretation influences the ways in which farmers make decisions on their farms, choose particular management operations, and generate value in relation to their labor as well as their food.

Based on this analysis, the farmers are very similar in practice and mind. However, there is still a divide that looms over farmers of different orientations such as those who align with "sustainable" and those who align with "conventional". Why would this exist alongside all of the similarities that they share? If sustainability is about changing our lifestyles so that we can reverse the detrimental effects of our current lifestyle, then all of those people who are actually doing something to achieve this should be united in this endeavor. Yet, there is still a feeling of "that farmer is different than me" and this feeling manifests in daily life as a lack of interaction, sharing, and collaboration. Why? I began to become very interested in this phenomenon because the answer would help in dismantling the assumptions, preconceived notions, and lack of engagement among farmers of different alignments (the categories or alignments of

"sustainable," "working toward sustainability," "conventional," "or leaning toward conventional").

This chapter examines the strong divide among, not just farmers, but also non-farmers who align themselves with a "sustainability" agenda in order to understand why such a divide exists in the first place. As my research demonstrates, the divide is not upheld by a specific difference in actual on-the-ground practices, although that is often mistakenly the belief and argument. I explore how sustainability rhetoric has positioned itself in stark contrast to conventional or traditional operations and procedures so forcefully that the specifics of what is actually occurring within different operations have become lost and hidden under the labels. The labels have also become immensely value-laden and serve not only as markers of identity, but also as deterrents to the co-mingling of those individuals who have been set in opposition to one another. In chapter 4, I explained that there is a difference between sustainable practices and sustainability ideology. I will further explore this difference and how it lies at the heart of why such a divide between sustainable and conventional farmers exists and also how it overrides the "uniting potential" for collaboration of the similarity in practices as well as the holistic interpretation of the farm as comprised as interrelated elements.

6.1 SUSTAINABILITY ORGANIZATIONS ARE TALKING THE TALK, BUT ARE THEY WALKING THE WALK?

The sustainability movement and its rhetoric have permeated many different sectors of society as I discussed in chapter 3. The movement has established a firm place within agriculture and proponents have carved out their own label of "sustainable agriculture." Sustainable agriculture

has had a long and intense journey to get to where it is today. Its early foundations in organic agriculture beginning in the mid-twentieth century fell short in responding to the many concerns voiced over time. Organic agriculture does have its many successes however, and the conception of something being different from and opposed to the archetypes of agricultural methods at that time did lead to the beginning of conceptualizing different kinds of agricultural practices and philosophies. Organic agriculture was viewed as the opposition to the ways things were currently being done.

We often take this seemingly obvious observation for granted; but we shouldn't because it is with this idea that there are now two kinds of distinct agricultural operations functioning that have given rise to an often deceptive and illusory dichotomy. Before concepts of sustainability, alternative agriculture, like organic agriculture was mostly focused on different approaches and techniques to appropriate nature within the intersection of production and environment (Mann and Dickinson 1980). It was because of the different goals of organic agriculture that the problems we see today within organics did not surface until after the concept of sustainability had been introduced and applied to agriculture.

The goals of organic agriculture more directly relate to changing specific ways agriculture produced and extracted food from the environment. During the mid-twentieth century agricultural production and yields increased due to the application of chemical fertilizers and pesticides. Proponents of organic methods worried that the application of such chemicals would only make problems worse because they were concealing what was actually happening to

the environment[30]. The chemicals were causing resistant strains of "pests" such as non-beneficial fungi and insects, masking the depletion of topsoil, and running off into waterways. In fact, not all of the pesticides would settle on the target and much of it finds its way into human contact (Pimental and Levitan 1986).

Although the organic movement did meet many of its goals such as decreasing chemical inputs, there were goals that fell through the cracks. The ideas of sustainability more specifically captured those goals that the organic movement had missed. Whereas organic agriculture focused on humans' interaction with and extraction of nature, sustainability intended to introduce additional elements to consider. Sustainable agriculture is supposed to address issues beyond those relating to the extraction of resources specifically from nature, but to also include the effects this it has on society. Sustainability is often characterized as encompassing an emphasis on environment, society, and economics (Buttel 1993, Dahlberg 1991, Davis and Langham 1995, DeLind 2002, Lyson 2000, McCabe 2003b, Wilk 2006).

SARE, the sustainable agriculture organization within the USDA that conducts research and relegates grant money advocates that it too encompasses additional considerations in comparison to organic agriculture and especially conventional agriculture. Organic agriculture was the answer to perceived environmental concerns arising from conventional agricultural methods; however it did not provide solutions concerning inadequate incomes, unequal access to healthy foods, and retention of money and jobs within local communities. SARE promotes the significance of these additional concerns within their research program. Their website

[30] Concerns over the application of artificial fertilizers occurred much earlier in the nineteenth century (1850s) with individuals such as the soil chemist, Justus von Liebig, the economics Henry Carey, as well as Karl Marx (Allen 2004).

specifically refers to this as improving "the profitability, stewardship, and quality of life" (SARE 2014a).

However, in chapter 4 I illustrated the discrepancy within SARE's rhetoric and its actual on-the-ground practices by revealing the projects that they actually funded were more representative of "conventional" agricultural concerns, i.e. production. This is at odds with their rhetoric as being in opposition to "conventional" methods not only in practice, but also on moral grounds. When SARE did fund "social category" projects they were projects that focused on "subjects such as local food production and marketing, farmer quality-of-life comparisons, and the implementation and adoption of sustainable agricultural practices" (Allen 2004:97). In addition, SARE funded production projects in every year, but the "quality of life" projects only received funding four years out of ten years. This reflects a "disconnect between discourse and practice" (Allen 2004:97). Allen (2004) criticizes this contradiction and attributes the problem to epistemological assumptions. She argues that sustainable agriculture is still being constructed through the traditional Western epistemological tools of natural science and neoclassical economics, which is due to the lack of collaboration between natural scientists and social scientists when addressing sustainable agriculture (Busch and Lacey 1983).

Understanding the many elements and factors involved in sustainability requires additional worldviews other than Western science and needs to be complemented with other ways of knowing (Kloppenburg 1991, Redclift 1993). The premise of this type of understanding, knowing, and analyzing the world excludes many different elements and interactions and solely focuses on a technical process of resource extraction from the environment. Using such a limited view has repercussions for how narrowly problems are defined and thus how restricted and constrained the solutions are. This demonstrates then that

when categorizing sustainable agriculture under the umbrella of alternative, all the "alternative" really means is alternative biological and technological means, rather than addressing the social, political, and economic factors. In employing an alternative approach, it should be impossible to exclude the socioeconomic processes involved within agriculture (Altieri 1987).

In chapter 5, I included the example of the bison industry as illustrative of incorporating a more holistic study of farmers' decision making, but the example also demonstrates how what is considered "alternative" can come to hold symbolic value when the actual goals and practices do not differ from "conventional" methods. There are many aspects of sustainable agriculture that are now running this same risk. It only retains its "alternative" status because of what has been instilled into the minds of the consumers.

SARE is not alone in falling prey to these shortcomings. PASA has their troubles too. PASA is the other organization that many of the farmers in my study who align with "sustainability" participate in, use, and access. PASA has numerous events, meetings, and workshops every year that farmers can attend, learn from, and share their experiences as well. It too concentrates extensively on the production side of agriculture with the same epistemological foundations as conventional agriculture. For example, a few of their workshops include "Organic Blueberry Growing," "Essentials of Shiitake Mushroom Cultivation," "Food Handling Practices," "Cover Crops," "Utilizing Native Plants for Grazing, Landscape Design, and to Establish a Nursery," "Participate in Fixing Food Safety Regulations," "Pastured Poultry Basics: From Field to Table," "Soil Management Field Day," "Health Insurance for Small Farm Businesses," " "Grazing Conference," "Improve Animal Health and Business Performance," "Harvesting and Processing Value-Added Grains for Local Market". These are just some of the

titles of events, workshops, and meetings that were mailed to me by PASA over the course of one year 2014 – 2015 and very few relate to other elements other than production.

SARE and PASA represent the two local organizations that "sustainably" aligned farmers utilize. WVU Extension Service is the organization that mostly the "conventionally" aligned farmers tend to contact more often for advice or respond to when called upon. Extension agents used to visit farms often, disseminate information, and build relationships with the farmers. However, the farmers told me that this rarely happens anymore unless they already had a friendship established. When there is contact between WVU Extension and farmers it comes most often in the form of an extension agent contacting a farmer to participate in a field trial.

The most common field trial during my research was the installation of high tunnels for vegetable production. The central test for the high tunnels was to determine how much they can increase production. The field studies concluded that with the installation and use of high tunnels, farmers could extend their growing season by about a month. High tunnels began popping up among many of the farmers within my study and this was among the few cross-overs between Extension and "sustainability" aligned farmers. Most of the time however, if the farmers were not part of the field trial[31] then they explained to me that they were left to their own to determine what kind of high tunnel to construct, which materials were necessary, and how to even go about actually building it on their own.

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[31] There were two farm families within my study that were asked to participate in the Extension's field study. This is an extremely fortunate event, for when Extension initiated the participation then the farmer received grant money and guidance on how to construct the high tunnels. The high tunnel project was also the "baby" of one particular Extension agent. It was not a department program, but rather something that agent was specifically interested in.

I had personal experience with this occurrence as one of the farm families I was working with invited me to participate in the process so that I could understand it from the inside – out. I was set to the task of determining which high tunnel was best suited to their needs as there are several different models and designs. I was also asked to figure out which materials would be the best to use as there are different choices regarding plastics, metals, liner thickness, and strappings. Finally, I would need to calculate how much of each material would be needed to build the high tunnel according to the decided upon dimensions. It was a daunting experience, at best. I had not undertaken anything like this before and had limited experience with construction and carpentry. The farmers laughed about this and told me, "Yes, that is what it is like".

Figure 20: Amanda Zickefoose inside the partially constructed hoop house. Photo Credit: J. Reef.

The project was very involved and I spent much time researching all the areas they asked me to research. Then we would meet and examine everything and I could watch as they discussed their options and weighed in numerous factors. As part of the research I was doing for them, I called the local Extension agent first to see if he could point me in a direction to gather information. I had to call him three times before I received a phone call back and he told me he didn't know a whole lot about this particular issue, gave me the name of two manufacturers of high tunnels and that was about it. I checked with the manufacturers and reported back to the

farmers, but they explained that they really didn't want to use a manufacturer because they could save a lot more money by buying their own supplies and building it themselves. After more research, I heard about the Extension agent who sort of "specializes" in high tunnels for the region and called him several times and sent him a few emails. I never received a phone call or email back. I was pretty frustrated by this point and really felt what many of the farmers had been telling me which was that, "It's hard to get a hold of someone at Extension and it's hard to get a call back".

The Extension Service has had a long history of a relationship with commercial, conventional agriculture. It was established in 1914 by the Smith-Lever Act. The Extension Service is housed within Land Grant Universities (LGUs). There are two other units that are also housed within LGUs. The Colleges of Agriculture which were created in 1862 by the Morrill Act and the State Agricultural Experimental Stations which were established in 1887 with the Hatch Act. The Experimental Stations were created in order to conduct agricultural and rural research in cooperation with the Colleges of Agriculture. There are LGUs in all fifty states and they collect tax money from federal, state, and county governments. LGUs have been heavily criticized for the way in which they determine which research to pursue. It is argued that they do not represent the farmers or the rural American, but rather have been in the pocket of agribusiness. It is also maintained that they conduct research and then have great success in disseminating the findings to farmers. Thus, they create a monopoly over not just the research, but then which practices are used, which chemicals are purchased, and which corporations are then supported financially (Buttel 2005, Hightower 1973).

Table 7: Comparison of Agricultural Organizations

Organization	Alignment	Philosophy/Mission Statement	Research Focus	Epistemological Foundations	Representation
SARE	Sustainable-Friendly	Promote profitability, stewardship, and quality of life	Production: either increasing production yields or decreasing productions' effects on the environment	Western natural sciences	Staff hired by and appointed by USDA
PASA	Sustainable-Friendly	Improve the economic viability, environmental soundness, and social responsibility of food and farming systems	Production: either increasing production yields or decreasing productions' effects on the environment	Western natural sciences	Member – based
WVU EXTENSION	Conventional-Friendly	Assist owners and users of West Virginia natural resources to gain competitive social and economic benefits from these resources in a sustainable manner	Production: increasing yields	Western natural sciences	Staff hired by and appointed by LGUs

The criticisms of the Extension Service have left their mark on the reputation of the department. Farmers that did not often interact with Extension often explained that either they tried to get in touch with Extension with no success or if they did receive feedback or

suggestions, the farmers felt that it still wasn't that helpful. These farmers would explain to me that they felt that the Extension agents "really didn't understand what we're trying to do here". The farmers felt that not only the goals of Extension but also the values and philosophies differed too much from their own and so they couldn't or wouldn't implement any of the advice they gave them. The same occurred from the agents' perspectives. For example, one sustainability-aligned farm family explained to me that they weren't getting any responses from an agricultural agent they had been trying to contact. I was talking with that agent only a few days later and asked him if he had been out to their farm yet. He told me, "No not yet, I could go, you know, and look at stuff and then tell 'em what I think, but they aren't going to listen to me." He wanted to explain to them that they would have to do a lot to restore their pastures in order for cattle to be able to get the proper nutrition from them. The pastures the farmers wanted to bring into working order had been lying fallow for many years. The agent knew the correct measures were to apply fertilizers to fields, in this case chemical fertilizers not manure and he "knew" the farmers would not do this. He didn't feel it was really worth the time, saying "I could tell them my advice, but they aren't going to like it".

Not only do the sustainability-aligned farmers feel excluded from Extension (although they often exclude themselves), but often conventionally-aligned farmers feel excluded from the more sustainability-aligned organizations. For example, I was sitting and talking with a conventionally-aligned husband and wife farming team one afternoon and the husband began telling me his experience at a PASA conference:

> It was my first time there, I went with [my wife] she had been there before. There were a lot of people, I mean a lot and so many different workshops. We split up for some of them because some of them were at the same times as others we wanted to go to. So I was sitting in a workshop with, um probably thirty other people. One person was speaking and telling us stuff, but other people would interject and say stuff too. Then all of a sudden everyone started bashing Cargill.

> I felt so awkward and embarrassed you see, because I was wearing a Cargill hat and they were making it out like it was the devil. I just slumped down in my chair and took my hat off and hid it in my lap. It was terrible.

I argue that even though the rhetoric of the different alignments within the organizations does not always match the farmers' on-the-ground practices, it still describes a way of life in which the farmers believe. The farmers who do participate in SARE and PASA do not criticize the organizations for their lack of consistency. Instead the sustainability-aligned farmers feel that PASA especially is a worthwhile organization, and they learn much from it. The only complaint I heard was how expensive it is to attend the annual conference. I found similar positive attitudes from the conventionally-aligned farmers regarding Extension because they do not feel that they have trouble getting in touch with agents or getting the information that they need. Therefore, there is not much interaction among the differently aligned organizations and when there is, the farmers of the "opposite" alignment frequently feel awkward, almost like trespassing, as was the experience of the farmer wearing the Cargill hat.

6.2 COMMUNITIES

The participation within disparate kinds of communities also affects the lack of interaction among the differently aligned farmers. The conventionally-aligned farmers and the sustainability-aligned farmers belong to different communities which further decreases their opportunities for more frequent, daily interactions. The conventionally-aligned farmers belong to more commonplace types of communities such as churches and rural neighborhoods, while the sustainability-aligned farmers join communities which are less geographically bounded. The practice of defining communities simply along physical borders has been critiqued and improved

upon due to the ideological and technological changes occurring in a more globalized world. Although communities which have geographic boundaries and physical meeting places exist and flourish, scholars now recognize communities that are very different in nature such as Benedict Anderson's concept of the "imagined community." While Anderson coined the term "imagined community" in order to describe a lack of everyday face-to-face contact and a physical place in which interaction is either planned or accidental, others have studied the phenomenon as well (Anderson 2006).

In a sociological study, researchers used the term "liberated communities" to describe the complexity of urban communities, and found that the practice of using only geography as a unifying factor was inadequate (Wellman and Leighton 1979). In their analysis Barry Wellman and Barry Leighton argued that, "the identification of a neighborhood as a container for communal ties assumes the a priori organizing power of space" (Wellman and Leighton 1979: 366). They explained that the concept of liberated communities begins with the concept of space, and "confronts spatial restrictions only in order to transcend them" (Wellman and Leighton 1979: 377). Michael Robert McDonald used the idea of liberated communities in his study exploring the relationships among organic farmers in Ireland. Contrary to the fears of many academics, McDonald found that a sense of rural community among farmers had *not* been lost due to Ireland's membership in the European Community. Rather, the organic farmers participated in liberated communities which were intentional social forms based on a shared ideology and facilitated by advances in communication and transportation. McDonald argued that the farmers interacted and integrated as members of a community which was largely enabled

by different institutional resources such as labor resources, cooring exchanges[32], organic farming community specialists, farm salesmen, and the marketplace (McDonald 1994).

The sustainability-aligned farmers in my study participate in communities very similar to those which McDonald found among the organic farmers in Ireland. They engage in online communities through blogs, websites, listservs, and other social media within which they access and discuss information regarding sustainable farming and lifestyle choices. When a particular challenge arises which causes uncertainty, the sustainability-aligned farmers frequently turn on their computers and search preferred agricultural forums or websites for solutions. In addition, there are two well-known farmers, Joel Salatin and Elliot Coleman, whom most of the sustainability-aligned farmers praise for their innovative ideas and view as role-models in sustainable farming methods. The shared respect and admiration sustainability-aligned farmers have for the ideas and practices of Salatin and Coleman serve as a community because they feel a sense of collective identity and belonging with others who also admire the two farmers. When I heard a farmer respectfully mention either of these two men, it successfully signaled where the farmer identified along the sustainable-conventional spectrum.

In contrast, the communities which the conventionally-aligned farmers belong to are more geographically defined and represented by physical spaces. In one of the towns where several of the conventionally-aligned farmers reside, there is a hardware store which serves as the local hub for purchasing tools as well as accessing local information and socializing. Two older gentlemen who used to be full-time farmers, but still enjoy getting on the tractor to brush-hog the fields come to the hardware shop almost every day, sit in wooden chairs next to the coffee pot, and chat. An extension agent, who knew about these two men, suggested that I

[32] This is an Irish term which means neighbor-helping-neighborhood.

"spend some time down there at the hardware store and see what I could learn." I took the advice, wandered in one morning, and explained my presence to the owner who smiled and told me to "have fun." I introduced myself to the two gentlemen and asked if I could join them. They said yes, invited me to sit down, and asked me some questions about my research. Not long after we exchanged pleasantries a conventionally-aligned farmer came over to the coffee pot, poured a mug full of coffee and asked the men how things were going. In less than three hours, five different conventionally-aligned farmers came and went sharing stories of their kids, complaining about broken farm equipment, and talking about everything under the sun, including farming. While listening and watching, I began to realize that this hardware store serves as a center of community for many of the conventionally-aligned farmers in this town. While I did ask the sustainability-aligned farmers about this hub of information, they explained that they knew, "some people gathered around the coffee pot for hours", but they, "only went to the hardware store for supplies not coffee or information."

Due to the different nature of the communities accessed by the conventionally-aligned farmers and sustainability-aligned farmers, there are not many occasions when the farmers are in the same places, and this affects the opportunities for interaction. For example, the extracurricular activities of children such as soccer games serve as a common activity in which conventionally-aligned farming parents share experiences that are not specifically related to agricultural circumstances. However, these activities do not unite the differently aligned farmers because the differences in farming philosophies structure these aspects of their lives as well. For instance, while I was talking with a sustainability-aligned farming couple, the husband explained to me that:

> I can't even enroll my kid in soccer because I couldn't take him to the games because they are all on Saturday morning which is when the farmers' markets are.

> My wife couldn't even take him because she goes to one market and I go to another. I really wish we could make it work and I guess I could try to arrange for someone else to pick him up and take him, but it would have to be the entire time we're gone at the markets which is a good part of the day by the time we pack up and drive there and drive home. So it just doesn't work out.

In addition, most of the sustainability-aligned farmers who have children home-school them which means other shared events and activities concerning parents of school children do not create any overlap.

The communities in which the differently aligned farmers participate do not provide many opportunities for increased interaction. The events and activities which are products of particular communities are shaped by the farmers' perceptions about the world and what kind of life they want to live. Therefore, it is not just that the farmers lack the opportunities for more interaction because they belong to different communities, but rather they choose these communities based on specific ideological views concerning their preferred lifestyles. This foundational difference produces the separate communities which then translate into separate worlds, and the sustainability-aligned farmers have built their worlds upon a sustainability ideology which governs their choices. For them sustainability ideology constructs their worldview and serves as a guide when making decisions. For example, the sustainability-aligned farmer who couldn't enroll his child in soccer explained that this was because of the "kind of life" he and his wife chose to live:

> We could let him play, but then we would have to change the way we farm, I mean entirely because we wouldn't be selling at farmers' markets anymore which would be a totally different way to grow the products as well as which products to even grow. We might not even be farmers then for that matter. But we know this and if our kids were going to have a regular type of childhood then we would have a really different kind of life.

This farmer is very aware that "the kind of life" he and his wife want to live impacts many different aspects of their lives, and changing certain parts would call for an entire reconstruction of how they see the world and their place within that world. It would require a different ideological basis.

6.3 CONSTRUCTED BOUNDARIES: THE FENCES IN PASTURES ARE NOT THE ONLY FENCES IN AGRICULTURE

The divide between which organizations farmers feel most comfortable learning from permeates into the actual relationships between farmers as well. In chapter 4, I briefly discussed the borders that have been constructed among farmers of different orientations or alignments, specifically between those who align more along the lines of sustainable and those who align more along the lines of conventional. I included examples of farmers explaining to me that they do not interact with some of their neighboring farmers because they "do not farm in the same ways". The only time these farmers came together was when they incurred terrible storm damage. Other than that, they keep to themselves unless they identify each other as "farming in the same ways" which translates to "farming like me" either sustainably or conventionally depending on the point of perspective.

When I was visiting one conventionally-aligned farm, the farmer was telling me that "those farmers down the road; they do not want anything to do with us. They drove by one day when we were spraying the vegetables and now they won't even eat any of our food". The farmer took this as an insult because to him there is nothing wrong with his food. He went on to tell me his thoughts about those farmers, "Those farmers think they are so high and mighty and

judge everyone else who doesn't farm like them." The judgement that this farmer felt created a fence between them and it kept him from trying to connect with these farmers; let alone to try to approach them or explain his own philosophies of farming. I asked a sustainability-aligned farm family about their relationships with other farmers:

> MZ: Do you talk to other farmers around here?
> C: You mean about what? Farming?
> MZ: Yes, like do you ask them for advice or share you own experiences?
> C: Laughs, no, no. The farmers around here think we are all crazy. That we are the crazy farmers because of the way we farm.

Another sustainability-aligned farmer explained to me:

> I farm differently than conventional farmers because conventional farmers have more of an economic focus for farming and do not really experience an emotional type of fulfilment from farming the way I do. I talk more with other sustainable farmers like me; I can share my experiences with them and learn more from them. I just feel that I have more in common with them.

A group of farmers who identified as conventionally-aligned and I were discussing organic practices one blustery, winter afternoon and how some of the "sustainable" farms in the area were "organic"[33]. The interesting part is that these conventional farmers explained that they sell some of their conventionally grown tubers to an organic certified farm in Maine and then the Maine farm plants those tubers and grows them for a year to get them certified organic. The Maine farm then sells the maturing, certified organic tubers to other farmers to plant them on their own farm. One of the farmers told me:

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[33] As with the farmers in my study, the farmers we discussed were also mostly not USDA certified organic, but rather ascribe their own practices and philosophies to their organic description. The "conventionally" aligned farmers often simply referred to "sustainably" aligned farms as "organic" farms.

> I mean we raise those tubers conventionally, we're as conventional as conventional can be, but then that farm down the road [an identified sustainable farm] buys our potatoes from this Maine farm after that farm raised them organically for one year, but our neighbors won't buy them directly from us. You'd think with as much as we grow here we would feed everyone in the community, but they don't want the pesticides, very few people around here buy from us. We sell them if you go out in a ten mile plus radius, then people start coming in, but around here people won't buy them.

When I asked why, he explained that:

> Because either 1) people grow their own and 2) they see us spraying and it looks a lot more horrific than it is partly because our machinery is so old that it looks archaic and the way we spray it looks bad for the environment, we'll be air blast spraying[34] something a little, and just a tiny bit of drift goes off if it's windy, but um, people read stuff and only get one side and they don't get the whole story. They are overly undereducated and that's why they stereotype farms. People don't understand that plants are living things, well they might know that, but they don't know that they metabolize any chemicals or anything that is put on them, they use it up just like we do.

When I was discussing sustainability, specifically *economic* sustainability with a sustainability-aligned farmer, he informed me that:

> I mean, the question is how much do you need to make a living, how much do you need in order to make a sustainable farm business successful… and I'm not sure that agriculture is sustainable and I mean I've debated this for quite a while and I think that actually that's a big reason why people will naturally, in the flow of things, go to conventional farming because it requires less, uh, labor which is one of the biggest expenses of farm enterprises. So if you can reduce labor, if you can increase one person's productivity though at the same time it's also kind of stripped the countryside of people. The country can literally sustain less people. So it's less socially sustainable in that way.

This same farmer then talked to me about how inefficient sustainable farming is because:

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[34] Air blast spraying equipment has a large fan attached to it and uses the fan to direct the pesticide.

> It is often smaller in scale than conventional farms and so it requires more labor in the sense of what it requires to produce which is then less than conventional farms. Conventional farms can produce more with the same about of labor, equipment, and fuel or even less because the labor output is more efficient. This is why conventional farming became the norm, because it is more efficient. A conventional farm can put all of its produce in a tractor trailer and take it to the grocery when a sustainable farmer must drive to different markets in a rural area or the customers all must drive individually to the farm to pick up their CSA shares. I don't think that many "sustainable farmers" think about how they incur environmental costs this way. A lot of conventional farms are more efficient than my and many sustainable farms.

When I then asked why he chose a sustainable agricultural operation rather than a conventional one, he explained that:

> FST: It's a matter of, of idealism, yeah it's a matter of idealism.
> MZ: and your ideals are…
> FST: To tread lightly upon the earth
> MZ: and to you conventional farming does not tread lightly?
> FST: I mean it's problematic as I just expressed, but in its essence, I would say it does not tread lightly.
> MZ: What does the essence consist of?
> FST: I believe that the majority of agriculture is inherently exploitative of the land of people of uh, resources and the majority of sustainable agriculture the same as that, for reasons that I just mentioned in the sense of being inefficient and being unsustainable through waste.
> MZ: So to you, what are the differences between conventional and sustainable?
> FST: I mean it depends on if we're talking about pragmatism or dogmatism.
> MZ: pragmatism
> FST: Um, well I mean part of the basis for my thinking is not using inorganic means of fertilization or treatment for pests or diseases. The problem is particularly with like, uh fertilization is that the processes that define something as organic versus inorganic by and large don't make that much sense and don't really have that much relevance. Um, in terms of insecticides and fungicides it's a lot closer and where I would say I am kind of more connected to the ideals of sustainable agriculture in the sense that I don't want to produce something that is going to cause harm to people or could cause harm to people and actually I want to produce something that benefits people and that increases their quality of life and that increases their ability to live healthfully and that can make a big difference.

This last example demonstrates an underlying theme among sustainable agriculture advocates: that conventional agriculture "harms people" and thus sustainable agriculture does not harm people and in fact actually "benefits people". Most of idea of "harming people" is tied to the chemicals that conventional farmers use to fertilize the soils, spray the crops, or feed the livestock. The thinking of sustainability advocates is that whatever ends up in the soil, on the crops, or in the livestock will eventually be passed on to people when we eat the foods produced from these circumstances. Even some of the sustainability-aligned farmers expressed to me that they don't even like to use "organic" fertilizers, pesticides, or fungicides because it is still a poison. It might be derived from a plant, but it is still a poison. There are a lot of plants that can still be harmful to humans like poison ivy. However, even with this perception of organic versus non-organic chemicals, the sustainability-aligned farmers still prefer the organic chemicals if they need to spray or incorporate soil amendments. There is still the idea that the conventional chemicals are worse and so they are choosing the "lesser of two evils". Thus the type of chemicals farmers employ and their reasoning why signify to other farmers, in large part with which "side" they align.

These sentiments of belonging and aligning with others of similar agricultural identities continue to produce and reproduce barriers between farmers. Just as the farmers who align themselves with certain organizations such as sustainability-aligned farmers with SARE and PASA and then conventionally-aligned farmers with Extension do not participate much in cross-participation among those organizations, the farmers of different alignments do not often cross-connect with each other. The farmers who align themselves along the lines of sustainable do not connect much, if at all with the more conventionally-aligned farmers and vice-versa. This

separation has been circulating throughout the sustainability discourse. It is part of sustainability ideology that sustainable agricultural stands in stark contrast to conventional agricultural and since sustainable agriculture has been created in order to reverse the effects of conventional agriculture then the thinking has been that there must not be anything that sustainable agriculturalists can learn from conventional agriculturalists.

There are two major inconsistencies which I have discussed that infuse the sustainability movement:

1.) The persistent disconnect between sustainable organizations' rhetoric and their on-the-ground practices, and
2.) The practices of identified "conventional" farmers, who are supposed to be "the enemy", are actually practicing many of the same practices that identified "sustainable" farmers are practicing.

The two inconsistences are similar in that they demonstrate that the movement is not as uniform as many of the advocates claim it to be. However, they are distinct in that they reveal something different about the two "opposing" sides of agriculture. The first inconsistency shows that sustainability organizations are basically claiming to be more sustainable than they actually are in regards to their own definitions used in their mission statements. The second inconsistency demonstrates that the "conventional" farmers can be sustainable as well and are often overlooked concerning this contribution solely because they are not aligning with a sustainability rhetoric or ideology or perhaps more importantly that they *are aligning* with a conventional identity. Just the practice of which "side" these farmers align with stipulates who they then associate with and from whom they feel they can learn. This is an unfortunate problem because it limits the farmers' resource base drastically.

Many of these farmers do not know much about each other except of their affiliated side and so this automatically precludes them from asking for advice, offering help, and collaborating

frequently with respect to farming. This is the real loss. How can we expect to improve our circumstances if we only seek answers based on preconceived notions that limit not only what those answers can be, but in fact what the problem may even be. Busch and Lacey (1983), Kloppenburg (1991), and Redclift (1993) argue that a central flaw to "alternative" solutions is that there is not enough collaboration between the social sciences, natural sciences, and other ways of knowing. They maintain that to truly explore our options, we need collaborations from "opposing" sides. Then we can realize that the sides need not be "opposing" at all, but rather mutually informing. The argument I am making is very similar: we need collaboration between the "opposing" sides of agriculture. I have showed that they are not that different in practice both in organizations and among small farmers, so what is the problem? The problem lies with the differences among ideologies. In the next section, I explore ideologies and specifically how they relate to small, rural farmers.

6.4 IDEOLOGY AND SUSTAINABILITY IDEOLOGY

In this section I define what I mean by sustainability ideology and how this fits within other scholarly explanations of ideology. I will also discuss how this specific ideology has affected and continues to affect sustainability programs, platforms, and discourses domestically and internationally, how it fashions individual as well as collective identities, and how these identities have been used to navigate a particular perception of the human-environment relationship and how some feel that relationship should be organized.

The concept of ideology has been defined, described, criticized, and revaluated for hundreds of years and many prominent social scientists such as Bonaparte, Marx, Geertz,

Althusser, and Levi-Strauss have reflected upon it (Porter and Ramsey 2010). In discussions of ideology, power takes the attention of most theorists because it is argued that through the creation and operationalization of ideologies, power is not only demonstrated, but also executed. In the mid-twentieth century the conceptualization, classification, and explanation of ideology was strongly guided by the social principle of that time, structuralism.

6.4.1 Structuralist ideology

One prominent example of structuralist ideology is the work of Marx and his ideas highlight the state and the economy. Ideology fits within this framework as being "employed exclusively in reference to state power" (Malešević 2006). This type of Marxist thinking is different than the more agency oriented model because there is less emphasis on the function of class struggle and more on state power. It also emphasizes such factors as domination and control and pays less attention to other features and functions (Freeden 1998). Althusser also took on a Marxist structuralism in his theories of ideology, but his well-known contribution was built around the concept of Ideological State Apparatuses (Althusser 1972).

> …Althusser has encouraged the conceptualization of power as a force which operates in ways that are subtle, disguised, and accepted as everyday social practice. Althusser differentiated between two major structures of power in modern capitalist societies. The first, he called (Repressive) State Apparatus (SA), which is power that the state wields and manages primarily through the threat of force. Here the state sanctions the usage of power and repression through such legitimized mechanisms as the law and police. Contrasted with this is a second structure of power – Ideological State Apparatuses (ISA). There are institutions which have some overt function other than a political and/or administrative one: mass media, education, health and welfare, for example. More numerous, disparate, and functionally polymorphous than the SA, the ISA exert power not primarily through repression but through ideology. Designed and accepted as practices with another purpose – to educate (the school system),

> entertain (film industry), inform (news media), the ISA serve not only their stated objective but also an unstated one – that of indoctrinating people into seeing the world a certain way and of accepting certain identities as their own within that world. [Allison 2013: 155]

Althusser believed that the ISA were more powerful than the SA because they can be more far-reaching and insidious due to their often being unnoticed. The ISA also belong to the private domain, while the SA belongs entirely to the public domain. Althusser calls upon Gramsci to explain this point of distinction for he prioritizes how law exercises its authority and describes the classification as resting more heavily upon how the institutions exerting ISA function, rather than how they are recognized i.e., as either public or private institutions (Althusser 1972). The concept of ISA is an important part in understanding how sustainable ideology can be so influential and powerful, a discussion which I will turn to later in this chapter.

In her work on Japanese lunch-boxes referred to as obentōs, Anne Allison argues that the obento is a tool for Ideological State Apparatus (Allison 2013). She took notice of this process during conversations with her son's nursery school teacher. Neither Allison nor her son is from Japan and she discussed his progress and assimilation into Japanese culture with the teacher. To Allison's surprise, the teacher was not as worried about her son's disruptiveness or reluctance to learn the Japanese language; rather the teacher was most concerned with the problem of his not consuming his obentō in its entirety. Allison then began to formulate the theory of the obentō as ISA, which she bases upon the formal and informal rules of obento-making and consuming for both children and mothers.

The obentō not only sets rigid guidelines for children that have foundations in obeying the rules, following directions, and accepting authority, but also for mothers who define their identity as "good mothers" around their ability to create proper obentōs. The inclusion of the gendered role of what it means to appropriately perform motherhood is tied to the children's

instruction to consume their entire obentō because it is seen as the mothers' responsibility for the child to be able to attain this. The preparations of obentōs follow stylized rules based strongly within Japanese cultural food norms. For example, there are codes for the preparation techniques such as smallness (small portions), separation (individual dishes) and fragmentation (multiplicity of de-centered parts). The creation and manufacturing of obentōs argues Allison, indoctrinates the mother into a supportive role that she will carry out for the rest of the children's educational lives and it is the mother who is blamed if the child fails and praised if the child succeeds (Allison 2013).

Figure 21: Example of an obentō. Photo Credit: Flickr Creative Commons Open Source Images.

6.4.2 Poststructuralist ideology

Poststructuralist views of ideology differ from the structuralist views in that a common theme of among poststructuralist thinkers is that in a sense, there is no such thing as ideology. For

example, Foucault argues that power and knowledge are inseparable because power constructs new knowledge and new ways of perceiving the world, but power cannot be exerted without the appropriation of knowledge. Power and knowledge inform one another. Therefore ideology cannot exist in opposition to science (a critique of structuralism's binary opposites) because there are many truths.

Truth is situational and historically and geographically generated and always entangled with power. There are not any universally accepted methods to determine truth from non-truth. (Foucault 1977, Malešević 2006). Many other scholars agree with Foucault, such as Baudrillard, in that there is not value in treating ideology as an analytical tool. Poststructuralists argue that each culture has its own regime of truth and since power is tightly tied to truth- production then ideology whether a macro (universal) or a micro (culturally specific) meta-narrative does not prove to be beneficial in understanding the world. It is necessary then when studying an object or concept to also examine the systems of knowledge which produced it. Poststructuralists therefore, found it very ineffective to incorporate the term, ideology, into analytical examinations because they argued it to be too much of a "Truth" that ultimately does not exist. For them, it made much more sense to examine what influenced particular understandings of the world to emerge, specifically what kind of power lay behind the creation and dissemination of certain ways of knowing the world.

6.4.3 Sustainability ideology

Regardless of the criticism of the poststructuralists, many scholars have still found it valuable to use the term "ideology" as an analytical tool in order to understand our contemporary world, and some academics have salvaged parts of its structuralist influences as well (Allison 2013,

Williams 2002). Frequently a combination of structuralist and poststructuralist interpretations of the concept of ideology has been merged with ideas of individual freedom, personal choice, and agency (Giddens 1986). By being explained in this way, ideologies are considered to be "a collection of ideas that inform the way we look at the world" (MacKenzie 2002:11-12). More pointedly, not only do ideologies shape how we view the world, but they also contribute to how we act in the world (MacKenzie 2002).

My use of the term ideology is very much based upon these concepts. I define sustainability ideology as a set of beliefs which govern the way many people interpret the world and their place within it. In chapter 4, I explained that most of the sustainability-aligned farmers felt that other farmers could be using sustainable methods, but they were still missing "something." This "something" is a shared understanding among sustainability-aligned farmers that there can be underlying beliefs and values that are missing from farmers that are doing everything else "right." It is not about whether farmers use sustainable practices, but rather it is about an overall, comprehensive idea concerning farming as a lifestyle. The sustainability-aligned farmers subscribe to a sustainability ideology that they feel sets them apart from farmers who do not share this ideology. It serves as an identity for these farmers in that it *gives them a sense of who they are as farmers and as people*. To them it is not just about planting cover crops. Rather, it is a fundamental worldview that governs their agricultural practices and the underlying reasons for those practices. It is the ideology that feeds their on-the-ground practices and shapes the farmers' interactions with other farmers and agricultural organizations.

Sustainability ideology influences how the farmers perceive themselves and others thereby creating a rubric for identity. The farmers who subscribe to a sustainability ideology talk about raising healthy animals, producing good food, and decreasing impacts on the environment

as being part of a passionate movement and a restructuring of the social order. The conventionally-aligned farmers also talk about raising healthy animals, producing good food, and decreasing impacts on the environment, but in a completely different way. For them it is less "new and radical" and more "business as usual" which is often misunderstood as disinterest.

Sustainability ideology results in a relationship of "us/them" with farmers often discussing this type of distinction with me by saying, "Yeah those farmers do all the right stuff, but they just don't get it. They think that because they use sustainable methods that it makes them sustainable farmers and it doesn't." To most of the sustainability-aligned farmers, sustainability is something that is *more than specific practices*. It is about a particular interpretation of the world and their place within it. Sustainability is about specific values and beliefs concerning the environment, human beings, and the world. It is about identity and belonging.

In this dissertation, I refer to those who subscribe to a sustainability ideology as sustainability subscribers, and they base their perception of how the world works on a specific understanding of the human-environment relationship. Many of the subscribers (farmers and non-farmers alike) see a world that is plagued by assaults against the environment which threaten the earth's very existence. They consider the majority of lifestyles which humans have acquired through adaptions and personal preferences, as well as political and economic interests, as contributing to the problem. By encompassing this kind of a worldview – that the lifestyles of countless people are destroying the earth and many of its human and nonhuman inhabitants – sustainability ideology formulates a particular way in which to interpret and designate "problems." Once the problems have been identified then the solutions are sought after, but only

those solutions that are specifically tailored to respond to a particular interpretation and of the "problems" (Guyot 2011).

Sustainability subscribers label certain kinds of relationships among humans and the environment as "problems" based on the way they interpret not only the larger picture of the state of the world, but also the smaller pictures which comprise the individual relationships among humans and other species. For example, a quintessential Appalachian example is the controversy surrounding coal mining which has been criticized for its particular methods of extraction and effects on the environment. There are numerous examples of the negative impacts of mining such as poor habitat stewardship and land reclamation efforts as well as the damages from mountain top removal (Baller and Pantilat 2007, Fisher and Smith 2012, House 2008, Montrie 2000, Scott, et al. 2005). Many of the sustainability subscribers believe that coal mining not only causes ecosystem degradation, but also contributes to greenhouse gas emissions which intensify numerous consequences from climate change to species endangerment.

This view of coal mining as unilaterally detrimental has resulted in the decline of coal production via the intervention of the United States' government through ultimatums, strict regulations, and the forced closures of several coal mines in Appalachia. Some of the farmers compare the "unfair" agricultural regulations which are "written more for large scale, industrial farms" to the mining regulations that have been introduced in the area which are also "written more for large scale, deep mines." Primarily due to the pressures of governmental changes Murray Energy, which recently purchased all of Consol Energy's West Virginia mines, laid-off more than 1800 employees during the summer of 2015. That is 21 percent of the company's workforce, and it is only one of many lay-offs (WTRF 2015). The closures are not just about a few miners losing their jobs, but rather the loss of thousands of livelihoods and the forced

relocation of families (Binns and Nel 2003, Cropley 2014, Fitzgerald 2012, Mattise 2014, Scott 2007)

6.5 THE EFFECTS OF SUSTAINABILITY IDEOLOGY GONE ASTRAY

One of the many challenges complicating sustainability goals, plans, and policies is that there are so many different factors to consider. Sustainability is about the environment, yes, but also about the economy and society. Coal mining and burning coal have resulted in many disastrous events. The problem, however, with simply shutting down coal mines and coal fired electric plants is that it harms the economy and quality of life in mostly small, rural communities. Many scholars have begun realizing this and have been writing of similar situations around the world, where policies enacted along the lines of sustainability rhetoric have simultaneously protected ecosystems with one hand and have harmed or severely limited local communities with the other.

For example, Terrence McCabe (2003) has studied sustainability issues among the Maasai of Northern Tanzania and how conservation policies have impaired their way of life. In 2001, the Prime Minister of Tanzania announced that the Maasai would no longer be allowed to use a specified piece of land to cultivate their crops. This specified piece of land had become the Ngorongoro Conservation Area in 1959, land that the Maasai had been using for years. This was not the first time a ban had been evoked upon the Maasai. They suffered an earlier setback in 1975 although that time included an eviction notice for the Maasai as well. The ban was lifted in 1992, only to be reestablished in 2001. Cultivation had become an important component in the livelihood diversification strategies which the pastoral Maasai have incorporated in order to fashion a more sustainable lifestyle. Cultivation has been a strategy the Maasai have adopted to

cope with increasing population pressure, fluctuating livestock population, and reductions in grazing areas. Once the Maasai began cultivating and their practices brought them into the protected lands it was brought to the attention of development planners and environmentalists. These groups of people saw the agricultural practices as problematic and as threatening the balance of the ecosystems, not just within the Ngorongoro Conservation Area, but anywhere the Maasai lived (McCabe 2003a).

The support for this way of thinking came strongly from Garret Hardin's *Tragedy of the Commons* (1968). Hardin argued that people who individually owned something, such as cattle, would graze them in communally owned areas, which would lead to over-exploitation of the grazing grounds or whatever the resource might be (Hardin 1968). Unfortunately, this interpretation permeated policy planning and pastoral peoples soon came to be deemed as upholding "unsustainable" livelihoods. However, scholars have since studied pastoral groups and have found that their lives do not reflect such simplified description and in fact, Hardin had confused "open access" with a management system based on communal property (McCabe 2003a, Ostrom 1990).

Despite the work done to set the record straight, many still harbor the idea that pastoralism is inherently detrimental to the environment and when the Maasai began cultivating it augmented the concern regarding the effects to the environment. Even though the park was created with the intent to protect both the environment as well as the resident Maasai, the Maasai have often fallen below the priority of the biodiversity of the park. Under "sustainable" conservationist policies the park has banned agriculture and hunting, which are two important livelihood strategies for the Maasai. This example further problematizes sustainability ideology when only one element, the environment, is being prioritized above the other elements when

sustainability rhetoric claimed to include more – in this case the human element. The issue here is not whether nature should be prioritized or people should, but rather that this inconsistency has become embedded within sustainability policies.

The emphasis placed on nature over humanity has stemmed from a different branch of the environmental movement within the United States. This new branch arose when people broke off from the mainstream Rachel Carson "shallow"[35] environmental movement and formed a new paradigm: New Ecologists or deep ecology (Sale 1986). Deep ecology is characterized as a shift within the environmental movement from an "anthropocentric" focus (human-centered) to a "biocentric" focus (humans as only one element in the ecosystem) (Guha and Martinez-Alier 1997). However, the question critics often ask of the biocentric model is "How can something be considered sustainable when it produces incredibly unsustainable lifestyles for people", as in the case of the Maasai.

When considering sustainability as an impetus for state or federal mandates, it is crucial to not only consider the environment, but also the other factors that "sustainability" claims to include because the mandates have enormous impact on the lives of those living within local communities, whether it is the Maasai or those families employed in the coal industry. Priscilla Stone puts it very succinctly when she cautions that we need to remember to ask, "Sustainable for what, sustainable for whom" (Stone 2003). Charles Redman shares a similar sentiment regarding the multidimensionality of sustainability when he explains, "In sustainability, what we have to get across is that there are not only multiple lines of information that we need to incorporate, but there are multiple ways of knowing the same information" (Guyot 2011: 12).

[35] The term "shallow" used here the way in which "deep ecology" has designated the difference between the old environmentalism of the 1960s which deep ecology advocates feel is in serious need of a make-over.

There is a need for biocentric studies when biocentric serves to guide the study to include environmental elements and not only focus on the human elements. Since I have showed how important biocentric studies can be in understanding farmers' beliefs and practices; I am arguing specifically against the *prioritization* of biocentric approaches within sustainability projects. Simply, sustainability projects need biocentric studies and analyses, but not to the point where valorization of the environment and/or its components displaces or marginalizes human beings. We need a combination of different elements, rather than emphasizing one over the other.

Another illustrative case study for how a biocentric approach to sustainability can affect the success of a sustainability project comes from India. Project Tiger began in India in 1973 and provides protection, land, and resources to the tiger population with an aim to increase the number of tigers. The Project has achieved this and holds the title of harboring the maximum numbers of tigers in the world (NTCA 2015). The problem is that a large amount of the land that has been preserved for the tigers was taken from local peasant populations, who have been forced to relocate and are not allowed to graze their livestock on any part of the tigers' land.

Not only does this demonstrate a clear prioritization of tigers over people, but there is also a deeper problem that results, one that is tied to an increased bifurcation of the rich and the poor. The initial stimulus for creating protected parks for the tigers and larger game in other parts of the world such as elephants and rhinoceros (Africa is a good example) came from wealthy ex-hunters turned conservationists who mostly represent India's feudal elite as well as officers from international organizations such as the World Wildlife Fund and the International Union for the Conservation of Nature and Natural Resources. These organizations simply brought the American system and philosophy of national parks and transposed them onto India without regard to specific historical and cultural nuances. Therefore, the environmentalism that

is being practiced among the Tiger Parks privileges the elite, whereas the environmental problems affect the lives of the poor as they face water shortages, soil erosion, and fuel and fodder scarcities (Guha 1989).

In addition, similar to the sustainability-aligned organizations such as SARE, the actual practices of the tiger conservation effort do not match their stated mission which includes, "addressing the issue of resource dependency of local people through sustainable livelihood options" (NTCA 2015). The National Tiger Conservation Authority which is managed under the Ministry of Environment, Forests, and Climate Change within the Government of India claims that it will find sustainable solutions for the people of India in addition to their protection of tigers, however as the above example shows this has not been the case. When efforts that are camouflaged with sustainability rhetoric are carried out in this manner serious problems arise that have resulted in greatly hindering people's ability to procure a livelihood and forcing groups of people to relocate from their homes.

The "New Ecologists" and "deep ecologists" that uphold the biocentric perspective attempt to gain their authority from an incorrect claim to an Eastern philosophy that nature is overwhelmingly biocentric. They argue that having a foundation within Eastern thought such as Hinudism, Buddhism, and Taoism gives their point of view universal significance. However, this generalizes too many different religious and cultural traditions and ignores the fact that:

> Throughout most recorded history the characteristic form of human activity in the "East" has been a finely tuned by nonetheless conscious and dynamic manipulation of nature. Although mystics such as Lao Tzu did reflect on the spiritual essence of human relations with nature, it must be recognized that such ascetics and their reflections were supported by a society of cultivators whose relationship with nature was a far more *active* one. Many agricultural communities do have a sophisticated knowledge of the natural environment that may equal (and sometimes surpass) codified "scientific" knowledge; yet, the elaboration of such traditional ecological knowledge (in both material and

> spiritual contexts) can hardly be said to rest on a mystical affinity with nature of a deep ecological kind. Nor is such knowledge infallible; as the archaeological record powerfully suggests, modern Western man has no monopoly on ecological disasters. [Guha 1989: 77]

The East has long been epitomized as the "Other" against the West and therefore can represent a body of wholly separate and alien philosophies and practices (Said 1979). "The East" has become the reflection of the Western interpretation of the East and this interpretation generalizes the entire region and denies the people there any agency. In actuality, the conflict over nature in India and much of the Third World results in a difference in interests between the rural poor and the more powerful commercial-industrial elite.

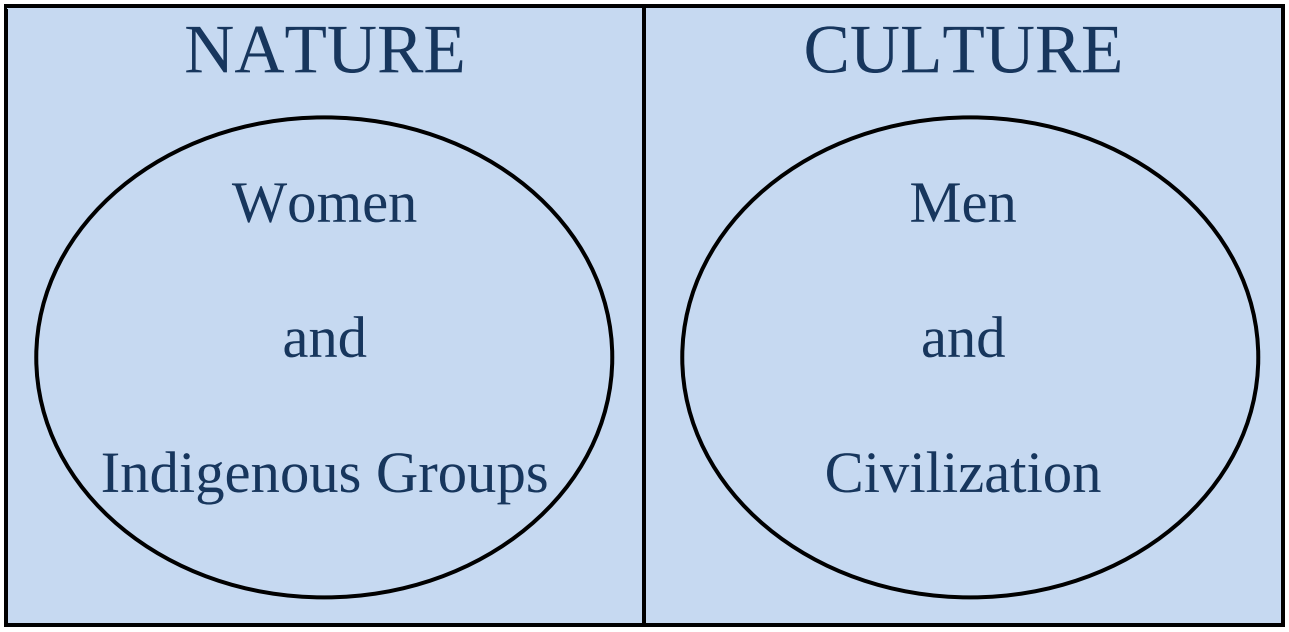
A good example is that of the Chipko (Hug the Tree) movement which is organized by peasants and consists of battling deforestation in the Himalayan foothills. The peasants of Chipko challenge the unsustainable use of the land and resources by urban centers and industry. However, their motivations do not necessarily encompass a wholly biocentric perspective nor does it reflect an "I am rock, I am nature, and we are all one" battle cry, but rather rests on the aspect of sheer survival because they need to use the resources as well (Agarwal 1986). In fact, a well-known Indian environmentalist explains that the biggest concern to India's environmental, conservation, and sustainability groups (such as Chipko) is to take away the management over the environment from the wealthy and elite groups and to place it in the hands of the local communities. They would rather it be in the hands of the local communities because it is these people who are most negatively affected by the policies. In addition, those groups who seek to achieve this modification in management are less concerned with environmental protection; rather "their main concern is about the use of the environment and who should benefit from it" (Agarwal 1986: 167).

This questions the idea that a biocentric emphasis is aligned with Eastern philosophy and in particular with indigenous worldviews[36] because many indigenous people are still primarily concerned with their own way of life and of their families over that of "preserving/conserving" the natural resources. They might feel that they can do a better job of managing the resources more sustainably, but they still want to use them in order to better their own *human* lives.

Often the idea of the East and indigenous groups being more 'in–tune" with and respectful of nature is incorporated into sustainability rhetoric and is used to argue that it is only the Westerners who are at odds with nature. This specific interpretation of "being at odds with nature" and trying to preserve wilderness is purely an American cultural and historical construct (Agarwal 1986, Guha 1989). In addition, when individuals use the sustainability discourse to outline a specific way to interpret and engage the "natural" world because it is more closely aligned with the way indigenous groups act, they are blatantly returning to the medieval interpretation of the binary oppositions created between nature and culture. In chapter 5, I discussed the Western historical and ontological emergence of the separation of nature and culture. Along with this separation, the people assigned other binary oppositions to each side: women and indigenous groups were attached to the nature side and men and civilization were attached to the culture side (Mullin 1999).

[36] This is not to say, of course, that they are not indigenous people or people living in the "East" that do not share in a biocentric perspective.

Table 7: Early Western Divisions of Categorizations



These categorizations still lurk within our society today. When individuals employing sustainability rhetoric incorporate generic examples of indigenous societies "living in harmony" with their environments as a means to claim some type of authority, they are implying that the indigenous are somehow more naturally connected to their environments and therefore are more *naturally* disconnected with culture/civilization. As I discussed in chapter 5, this disconnection is often referred to as something that has been lost[37], in that some people have let their way of life (their culture) interfere with and disconnect them from a more simple life, i.e. the life of "traditional natives". The concept of losing something refers to a time when we once had it (often either evoking our ancestors or our own childhood). That time is then expanded to not only a temporal measurement, but a specific space within existence which today is inhabited *symbolically* by indigenous groups. The lives of the indigenous in this sense have become

[37] I explore this specific idea of loss and disconnect in Chapter Five and how it influenced individual groups of society to live a certain way or change their lifestyles.

romanticized and are often still juxtaposed against the fast-paced, iPhone lives of the corrupt Westerners. For example, several scholars have written that "traditional livelihood systems" embrace the principles of sustainability (Alcorn 1999, Kothari and Das 1999, Posey 1999). In addition, often the concept of time is attached to indigenous agricultural practices in attempts to authenticate that the way those groups of people have been living (for the last 10,000 years) has not caused the kind of cataclysmic problems that we see today (Fernando 2002, Shiva and Jafri 2002).

I do not believe the all users of this type of rhetoric are even aware that they are reproducing the interpretation of a separation between nature and culture with additional binary oppositions dangling from them. Rather, they feel that instead "the corrupt Westerns" have a model to follow, the indigenous, that will guide them out of their destructive path of obliterating the earth and ending all kinds of life (Sponsel 2012). The problem with this line of thinking and incorporating it into sustainability rhetoric when it is applied in broad spectrum across all indigenous groups is that it obscures the actual desires and practices of those indigenous groups and of other marginalized peoples. It removes their agency by assigning our own interpretations of what they want and then implementing these interpretations into policies all over the world.

I am *not* arguing that indigenous groups cannot better sustainably manage certain resources than say governments or industries. There are many cases in which different indigenous groups have elaborate systems to manage their environments sustainably. For example, the practice of scapulimancy or shoulder blade augury used by different hunter and gatherer groups aided in determining hunting grounds. This type of scapulimancy is a process by which a person in a leadership role places a shoulder bone of an animal in a fire and then interprets the cracks created on the bone to direct the hunters where to hunt. The ritualistic

method also served as a strategy for managing resources by rotating which lands are hunted, thereby setting limits on the overharvesting of game populations and the potential depletion of resources (Moore 1957). In addition, the Abelem of Papua New Guinea have organized a sophisticated system of population control, game management, and conflict regulation around the practice of growing ceremonial yams (Scaglion 1999). Also, the recent slash and burn techniques of many indigenous groups that were previously considered to be completely unsustainable are making a come-back in United States' grasslands management systems as scientists are beginning to recognize their value (Fuhlendorf 2013). I am not arguing that we cannot learn from indigenous practices, in fact it is quite the opposite. However, I am critiquing a certain type of sustainability rhetoric that is often evoked and proves to be more harmful to the very same marginalized people it romanticizes.

More useful are the studies that I included on Terrence McCabe's sustainable livelihoods of the Maasai and Ramachandra Guha's analysis of the displacement of rural peoples by Project Tiger. We need to listen to what the people actually want instead of assuming we know what is best for them, even if they disagree with us. That is often the problem with such labels as "indigenous," "sustainable," and "conventional" – they make us believe that people or practices can be easily categorized and described when in reality, the labels are complicating the issue by masking true desires, systems, and ways of knowing and acting in the world.

A better solution would be collaboration between Western science and other epistemologies and some of this type of collaboration has already begun. For example, the creation of People, Land Management and Environmental Change (PLEC) is a project developed by the United Nations University. PLEC researches small farmers and their management of the environment on "demonstration sites" where the scientists learn from the farmers. The

demonstration sites belong to the rural people and the farmers carry out their own work. PLEC scientists observe the farmers' practices and collaborate with them to determine which practices are more sustainable (Brookfield 1999).

In Australia, collaborative work is being conducted between the government managers of the Wet Tropics of Queensland World Heritage Area (WTWHA) and the Kuku-Yalanji, an indigenous group living within much of the WTWHA. The partnership is based upon learning the role of Kuku-Yalanji fire practices in creating and maintaining biodiversity in the WTWHA (Hill and Smyth 1999). There are four major emphases within the collaboration process: 1.) "ensuring outcomes of relevance to Kuku-Yalanji, 2.) protecting intellectual, cultural and spiritual property rights, 3.) ensuring the participation in the research, 4.) establishing a process to reach agreement about the publication of the research data" (Hill and Smith 1999: 228).

However, there are still many more areas in need of collaboration than there are where collaboration is being attempted and not only in the developing nations. We are in need of collaboration within the developed nations as well. In the U.S., similar to those situations described in India and Tanzania, it is also a specific group of people, sustainability subscribers, who are influencing change. Just as the wealthy and elite classes in India and the government and NGO's in Tanzania, the sustainability subscribers are the ones not often directly affected by their policy changes. They may feel they will be affected if things don't change, for instance through a collapsing environment, but their current livelihoods and homes are usually not threatened.

For sustainability subscribers the closure of coal mines in Appalachia represents a victory. Many of them feel that by shutting down these mines we are rectifying a severe wrong that has been committed and perhaps are on the "right" track of finding other ways to power our

lifestyles; lifestyles which include, but are not limited to such elements such as transportation to work, access to computers and the internet, choosing (to a considerable degree) what foods we eat, and of course any hobbies we enjoy such as traveling, gardening, or trying new restaurants. All of these activities require, of course, some type of energy source even ones we might not consider such as gardening. Backyard gardening is a seemingly simple activity which has often been pursued and advocate by the counterculture because of its correlation with an assumed belief that it does not require too much non-human powered resources, that it represents self-sufficiency, and symbolizes a rejection to participate in the modern industrial agri-food system (Belasco 2007). However, gardening takes its toll also all fossil fuels unless one is using a scythe, no plastic, glass, or paper, and absolutely no water – even rain barrels come from somewhere often plastics, i.e. oil.

The point for citing such considerations is not to over-criticize sustainability subscribers as believing they are the only ones living a wholesome and zero-sum life, but rather to refer strongly to the conclusions drawn in chapter 4 that "sustainability" does fall along a spectrum. Even those lifestyles that are argued to be so drastically different than the other more "environmentally *unfriendly*" lifestyles, are still contributing to what they have deemed to be the troubles, even if it is considered by some measurements to be less. The problem with *not* recognizing the spectrum results in severe judgments of who is right and wrong, what is fact and fiction, and who should change (or be forced to change) the way they live. This of course is also true of those who oppose sustainability subscribers. The argument then is that both sides (not discussing all of those who fall somewhere in between) believe their way of understanding the "facts" is the "Truth" and the problem arises when they feel their Truth is the only acceptable means of operation.

When sustainability subscribers believe that only their interpretation of the human-environment relationship is the only one that makes sense then they are cornering themselves into a box with narrow and limited options. The reasons for interpreting the human-environment relationship as one of an "exploitative" nature rather than a more unbiased "consumptive" nature do not matter as much because regardless of one's reasons, their beliefs are supported by information that is interpreted as "fact". They "know" it is truth because either this is the way one has always viewed the world, or the keepers of knowledge for that particular culture have told them, i.e. published papers, or they have drawn their own conclusions. In addition, the kind of relationship that is interpreted by many sustainability subscribers is that humans have the wrong kind of relationship with their environment and if others do not see "how wrong" mining, pipelines, fracking, non-organic agricultural pesticides, and fertilizers are then they too are not only wrong, but often greedy, short-sited, and need to change. Specifically change means conform to how the sustainability subscribers view the situations.

6.6 SMALL FARMS AND SUSTAINABLILITY IDEOLOGY

The times when sustainability subscribers fiercely rally against what they believe to be the wrong kind of relationship with the environment i.e., coal mining, fracking, agricultural pesticides pushes them farther inside a box of only perceiving the situations one way. This can lead to neglecting other possibilities of not just problems, but solution as well and blindly rejecting alternative methodological approaches simply because they are not even considering anything else. When people become so very certain of the answers then they run the great risk of constructing a straw man. They begin to believe so strongly that there is only one view of how

the world works and if they disapprove of this view then they institute drastic changes. The changes often ignore the indirect consequences because those who have instituted the change have righteously convinced themselves that this is the only way and the "right" way. The indirect consequences often fall most heavily on the rural, local communities. The sustainability subscribers forget that making changes such as forcing mines regardless of the size of the company to conform to the same regulations as giant industrial mines, will not only inappropriately regulate some mines for rare possibilities, but also force them into bankruptcy because the amount of coal they bring in does not cover the cost of the updated regulations (Bredemeier 1974).

This same problem of ill-conceived, blanket regulations affects the small farms in my study as well and many of the farmers lamented these frustrations to me, often. For example, the Environmental Protection Agency and the United States Department of Agriculture stipulate state and federal regulations for farming operations and practices. One regulation that came up while I was doing my fieldwork which caused particular consternation and frustration for many farmers had to do with establishing the specific distance between livestock and waterways. There are often streams and creeks running through pastures. Farmers count themselves lucky when they have a waterway because they can take advantage of this and supply their livestock with access to freshwater, rather than hauling in water or constructing costly watering tanks from irrigation systems or underground springs. The governmental agencies specify that run-off from the livestock, particularly manure, ends up in the streams and creeks thus polluting not only the aquatic life in those waterways, but also ultimately traveling to additional waterways and polluting far larger areas. The biggest concern in this area of the country is the Chesapeake Bay Area. When I asked about this situation, one conventionally-aligned farmer told me:

> Now the government wants to tell us how far our cows have to be from the streams. We are supposed to fence off the water sources wherever they are, if the cattle pasture there. I mean c'mon, do you know how much pasture grazing I will lose, not to mention the cows need that water because they drink, you know, and cool off in it when it's 90 degrees out here. You know why they're doing it too, they're doing it because those big farms out West have so many cows that they do cause problems with the waters, but you know, we only have like thirty cows over there near that stream and I know it's not doing anything to that water because I've lived here all my life and I know about that stream. They don't live here, they don't know about that stream, they don't know what it was like twenty years ago or even yesterday, you know. But people get all upset because they think the cattle are polluting the steams and then they complain to the government and then the government comes down on farmers like us.

This is particularly bothersome and insulting to many farmers because they feel that the government and the "clueless public" think they understand the farm better than the farmer. This is very similar to the complaints of other local communities around the world (for example, the Chipko) who want to be able to manage their own resources without the government or industry trying to regulate them. This is a common problem and referred to as top-down management. This type of management lacks the participation and the voice of the local communities and instead represents the knowledge base of those who have more power. It assumes that local communities do not know how to care for themselves or their environments (Agrawal 1999, Escobar 1988, Escobar 1995, Slikkerveer 1999).

The resulting measures are often detrimental to the local people such as inhibiting livelihood strategies and displacing them from their homes. The local people become extremely frustrated with the lack of attention and respect paid to their types of knowledge. The following example from a conventionally-aligned farmer illustrates this frustration very well. I had asked the farmer about the situation of grazing cattle near waterways and how the government argues that it causes pollution within the water and in other parts of the environment as well. He

explained to me that he would know if the water was polluted. When I asked him how, he told me:

> We got a native trout stream and we've been farming since '92 here and I can take you down there any given day and show you native brook trout… and the government, oh the cows are messing up the watershed and causing nitrogen run-off well if that would be the case then the native brook trout wouldn't be there, you know as well as I do. The larger farms are more of a problem, our small farm isn't doing bad things to the stream. Yeah well, what was that about five years ago they were trying to pass the tier 2.5 act? Any stream in the state of West Virginia that had native brook trout they were going to make farmers fence their cattle off twenty feet from the river and thank God there were enough people that stood up and said no you know, come on. We would've wasted a lot of pasture because the creek runs the whole length of the farm. Like I said, them brook trout have been there ever since I was small and they're still there today and those cows have been drinking outta that water since I was little and still are today. And they complain about run-off well those golf courses they fertilize every day and may probably put 500/600 tons to the acre or I don't know, maybe not that extravagant, but it runs off too because the plants and grasses don't use all of it.

The farmers feel they are being unfairly excluded from the decisions and that their experiences are not represented in the legislature. The same farmer asked me if I thought golf courses and country clubs would ever be regulated this way. I just smiled and shook my head. He replied with, "There's no way in hell" and went on to explain that it's often those people who come out to the country on a joy ride and see certain farming practices and think that's what is causing global warming so then they go back and rally their friends and put all this pressure on the government, then the government makes changes. His brother chimed in at this point and added that people watch those documentaries too and think farmers are poisoning them.

In another example, a sustainability-aligned farmer explained to me how much changing regulations have cost them financially:

> We have to use these labels for our chickens and eggs and stuff and the labels have to say all this specific stuff on them because the government makes us do that. Well we have to put a label on every item we sell with all these

> specifications and we have to order the little sticky devil labels and then we print all the info on them like our farm's name and address and weights and stuff. Well the government decided to change what goes on that label and then instituted that anything sold now had to have that info on them and go figure we just printed up a new shipment we received before the government came out with this and we buy in *bulk*, I mean like 10 thousand labels. It's going to cost us several hundred dollars and this stuff happens all the time!

These stories are not at all uncommon when talking with small farmers and I've found they are not uncommon when talking with small business owners in general. They are tired of shouldering the effects of larger businesses that can afford to pay the fines and operate business as usual by tightening their purse strings through such methods as laying off employees whose names they barely know. Small business owners such as the farmers, know their employees names, often have lunch with them several times a week, know that their daughter just aced her social studies exam, and that their mother just came home from the hospital. The farmers explain to me that it is a different ball game, but the government and "people" don't care, they don't try to dissect the situation and understand what is happening. Instead when they hear that chemical pesticides are polluting the environment, "well then all conventional farmers are evil and trying to kill us".

Many of the farmers I spoke with are worried that West Virginia will soon adopt a Nutrient Management Plan (NMP). Nutrient Management Plans specify how much fertilizer, manure, or other nutrient sources are allowed to be applied to crops, while the timing and placement of the nutrient sources are also regulated. The farmers are fine with having a nutrient management plan and many of them have willingly adopted their own plans and feel it benefits their farm because it *helps them* make decisions, but does not mandate their decisions by law. However, what they are uncomfortable with is a state-issued nutrient plan, like the one Maryland has.

Maryland farmers are forced to comply with a government regulated nutrient plan because of the concern of nitrogen and phosphorus run-off into the Chesapeake Bay and its tributaries. There is a lot of resistance among Maryland farmers to this legislature because they feel that farm decisions are not only governed by science, but also include individual experience, knowledge and skills that respond to context specific environmental, economic, and sociocultural factors (Maloney and Paolisso 2006). The NMP's are strictly about science and lack the other components that the farmers feel are an important part of the process. A few of the farmers I talked to about the possibility of West Virginia adopting an NMP explained their feelings about it by providing me with an example. They usually gave me the same example. They are upset about being forced to apply their manure to their fields ten months prior to harvest. They've heard rumblings of this becoming a regulation and fear it will seriously disrupt their yields. They explained that much of the nutrients will be lost by the time they get their planting in and their crops will not benefit as much from them, thereby reducing quality and yield.

6.7 TRUSTING OR NOT TRUSTING THE GOVERNMENT AND THE INDUSTRY

The effects of sustainability ideology on structural changes are not the only effects felt by the small farmers. Structural effects often actually unite some of the farmers because in that case they have common enemies – big regulations and top-down management. However, it is not enough to entice them into more productive collaboration; it functions more as a common griping session. Instead the effects of sustainability ideology cause even more rifts between the farmers of different alignments. Earlier in this chapter I gave examples of how organizations and farmers who subscribe to a sustainability ideology are extremely unwilling to learn from and

respect those who do not hold a sustainability ideology and vice-versa. I will now explore another aspect of this issue that further illuminates the differences between the ideologies held by differently aligned farmers. Two major practices that set the sustainability subscribers/sustainability-aligned farmers in my study apart from the conventionally-aligned farmers were that of:

1.) Using non-organic, chemical sprays and fertilizers
2.) Vaccinating/worming

One common element that frequently arose during conversations for using these methods or not using them was trust: either trusting the government/industry or not trusting the government/industry. The introduction of this element supports this dissertation's main objective to reveal and explore the complexity of small farmers' decision making process. It is not a simple matter of some farmers use chemicals and some do not or some believe they are poisonous and some do not, but rather there is a deeper level of assessment on the part of the farmers because they actually reflect on how specific knowledge is produced. It becomes an epistemological examination of whose interests are being served and how knowledge and information are constructed.

The conventionally-aligned farmers in my study who do use chemical sprays and fertilizers explain to me that they follow the directions on the packaging. When I was discussing this with one farmer, he actually got up and went over to the piano where an empty bag was sitting and read me the application instructions, "This stuff comes with directions, you know." He explained that it's easy to follow and they tell you how much to put on specific crops or areas of ground. When I asked him who "they" is, he told me that the government regulates all this stuff and that there have been a lot of studies conducted in order to determine proper amounts. "Why wouldn't I trust them?" When he asked me this, I was surprised that he had pinpointed the

bottom line here as a matter of trusting his government. To this farmer and many other conventionally-aligned farmers, trusting the government or the chemical company was part of how they understood the use of the products to be safe.

Those who do not use chemicals or use only organic sprays express their reasoning with almost the exact opposite sentiment. They explained that they don't trust the government studies because it's full of politics, "Chemical companies lobby the government and give the government money and this produces biased results." One sustainability-aligned farmer explained to me, "I don't trust the EPA, I don't trust the USDA, I look at independent research studies and I look at what's happening on our farm and if it's something that my grandparents didn't use than I probably wouldn't use it either". When I would ask some of the conventionally-aligned farmers about whether they thought the government would tell farmers they could use something because a corporation gives them money, they explained to me that it wouldn't be able to work that way because as one of them told me, "I've read some of the studies, you know you can read them online, and it's all numbers and amounts, they can't change them". These farmers feel that the government would "not be able to" change the numbers of what are safe amounts to use, not based on moral grounds but more along the lines of legal grounds and practicality. Sustainability-aligned farmers feel that the government would not hesitate to "lie" and would not be held accountable because they are the ones approving the chemicals and the amounts of chemicals which these farmers feel are harmful.

This depiction of trust aims to reveal that differently aligned farmers trust in different ways and they trust different organizations. Many of them are reading the studies and feeling comforted by one organization or another. One sustainability-aligned farmer explained to me:

> You have to look at the studies and if it is a study that is not funded by the government or the industry that is producing that particular chemical or whatever,

> then it is more reliable. I tend to trust those studies that are done by independent research firms and I think that, the government and the EPA and industry base studies test a particular component of an herbicide and they don't always look at the interaction of all of the ingredients say in Roundup. The main um ingredient in Roundup is glyphosate but there's a lot of other little ingredients that they use to make it stick, to amplify it, you know, all these other kinds of things. They haven't looked at the interaction of the glyphosate with all these other ingredients. There are other research industries that have and they are finding, there was just a study that came out a couple months ago that all of those ingredients together in Roundup actually do something to the estrogen producers in women's bodies and they're finding that Roundup is a main culprit in breast cancer in women estrogen breast cancer in women because it, like hypes up those estrogen producer things and well it's crazy. So you need to look at how everything ties together, the big picture again versus one little ingredient. Okay that one little ingredient might not be bad but put everything else in there with it and it just kind of goes crazy.

Still, other farmers related the issue of trust to their own actions. One conventionally-aligned mother of two, told me, "I wouldn't feed the food we raise [with chemicals] to our family if I didn't think it was safe. I'm not crazy. We trust the regulations that have been approved by the government and if we were at all concerned there is no way we would feed that food to our children."

Similar sentiments of trust permeate the decisions surrounding vaccinations and wormers as well. The more conventionally-aligned farmers who choose to vaccinate do not see anything wrong with the vaccinations. They do not view them as poisons and instead are very thankful for them because otherwise they could lose some of their animals to sicknesses and diseases which they feel could have been easily prevented. Their mentality is more about seeing the possibility of infection as something that happens to animals on a farm and use the vaccinations and wormers as a precaution. There are specific ailments that are more likely to strike on small farms in this region of Appalachia, such as "black leg" and so they vaccinate specifically for ones that they know to be around the area. They described it to me as more of a question, "Why

would I 'risk' losing an animal or 'risk' having an animal spread a disease throughout my entire herd". The sustainability-aligned farmers also take precautions, but in a different way. They feel they can prevent the diseases from manifesting on their farms through proper management practices and both types of practices utilized by the farmers introduce the concept of biosecurity.

Biosecurity is not only performed within military contexts, but from other points of species contact as well such as within laboratories, farms, markets, and even airports. Biosecurity efforts are aimed at securing "health" in the context of "emerging infectious diseases" (Nading 2013). The most well-known infectious diseases that often plague today's societies are HIV, Ebola, and malaria, but others too are of serious concern to not only health practitioners, but also policy analysts, and social scientists. These are diseases such as H5N1 and "mad cow" disease. Based on Foucault's theory of biopolitics, the discourse of emerging infectious diseases can shed light on how disease control has been used as political control and the operationalization of top-down management systems (Foucault 1978).

For example, the outbreak of H5N1 in Indonesia was described as a threatening new global pandemic by international and biomedical communities. By 2006, Indonesia had the largest number of human deaths resulting from this particular strain of influenza. The control and "handling" of the disease was taken over from Indonesian scientists and health care practitioners by the global health community, who claimed that the disease originated in commercial poultry farms and then moved to backyard poultry and then to people. Birds were often a symbol of Indonesia's biodiversity and beauty; however with the H5N1 "pandemic" they had clearly been repositioned from biodiversity to *biosecurity*. The birds were now part of a "multispecies cloud" of global health, transnational science, and industrial agriculture (Lowe 2010).

Most of Indonesia's chicken production came from individual farmers raising chickens in their backyards. The Woodrow Wilson International Center published a report citing the major responsibility of the spread of the influenza was the small, backyard operations. The idea was that they lacked the biosecurity measures such as hand-washing and vaccinations. Soon the "backyard free-range chickens" became associated with Asian culture and both were seen as a source of great risk and danger. The question than became whose biosecurity is at stake. An Indonesian doctor describes his thoughts regarding the "pandemic":

> Maybe the reason President Bush is so worried about bird flu is because his advisers told him about a story from the Qur'an called the *Parable of the Elephant Troops*. In the Parable and elephant army is out to destroy the Prophet Mohammed and his followers. The elephants were unstoppable until God sent a flock of birds to drop stones onto the elephants from above. Could the birds be a metaphor for a pandemic? Maybe Bush is afraid of H5N1 because God once sent wild birds to save Muslims, and this could happen again. [Lowe 2010:636]

This doctor's sentiments concerning the state of H5N1 and the developed world's response to that situation nicely demonstrates how disease and its vectors are conceptualized by different people and therefore the responses to them will differ.

The occurrence of bovine spongiform encephalopathy (BSE) or "mad cow" disease in Europe reveals similar control mechanisms, but this time by the country's own government. Ritvo (2005) argued that the British government purposefully downplayed the threat of "mad cow" disease to public health. In her study she explored why the British people remained so indifferent to the situation even after an official government statement was released saying that whatever was making the cattle sick could be transmitted to humans with similarly fatal results. She concluded that the British government had more of a vested interest in the effects to the beef industry and economy than to public health. Even though it did release a statement explaining to

the people that the beef could kill them, they managed to prioritize other elements that rose above the risk of death.

Britain has a long history with beef production and it serves as a source of identity and pride for the people. Ritvo argued that the government tapped into this agrarian past and associated eating British beef with patriotism in order to connect the interests of the nation with its citizens and its cattle industry. This patriotism association was extremely effective. In a Chinese restaurant in Cambridge, Ritvo witnessed her companions make a point of ordering beef dishes to share and then take note of who declined to eat them (Ritvo 2005).

Although I did not have any cases of H5N1 or "mad cow" disease during my study, a common disease of much consternation among the farmers was that which affects cattle and sheep. Black leg, as the farmers referred to it, is a disease caused by the bacteria *Clostridium chauvoei*. Until recently no known cases of humans contracting it existed, and then a forty-four year old woman was admitted to the hospital with abdominal pain and generalized weakness. The doctors found that her infections were caused by *Clostridium chauvoei* and it is the first documented case in the United States (Weatherhead and Tweardy 2011). The cattle become infected with *Clostridium chauvoei* through the soil and it is fatal. The bacteria can lie dormant in the ground for years and so vaccinations are commonly recommended by veterinarians. However, the strong emotion attached to *not* vaccinating one's livestock as demonstrated by sustainability-aligned farmers signifies a particular intersection of agricultural practices and morality.

Similar to the sentiments attached to rotational grazing, many sustainability-aligned farmers believe that a properly managed farm can prevent diseases such as black leg as well as parasite infestations without the use of vaccinations or industry medicines. The biosecurity

management practices incorporate rotational grazing because the farmers believe that the rotation of the livestock to different paddocks removes their exposure to harmful bacteria, fungi, and parasites. It is also necessary to keep one's livestock separate from other farmers' livestock who do not practice such measures because there is a chance for contamination, not through the animals themselves, but rather through the soil. The animals can bring in contaminated soil on their hooves, tails, and anywhere on their bodies.

One of the sustainability-aligned farmers in my study who was particularly concerned with the issues of biosecurity (and she did use the term, biosecurity, specifically) and protecting her cattle from the contagions of other farms, asked me to either wear plastic booties covering my rubber farm boots or to wash my boots when I came to visit her farm. She knew that I was visiting different farms and did not want me to bring in the contagions on my boots to her farm. She felt she has worked hard to keep her cattle free from diseases and did not want to risk not only other cattle contaminating her pastures and fields, but other people as well. This farmer also purchases calves from a neighboring farm that does not practice the same biosecurity measures and therefore, she quarantines the animals for several weeks before introducing them into her own herd.

The farmers who choose not to vaccinate and instead incorporate different management practices in order to prevent disease generate a specific kind of value for themselves as farmers. They feel it is in line with their goals of having a sustainable farm or working toward sustainability. The value that they feel they have also transfers to their livestock as they will advertise that they do not vaccinate or use wormers on their animals. This is a distinct way in which they set themselves apart from those farmers who do vaccinate and worm. They feel that

their meat is healthier and lacks the "poisonous" or "unnecessary"[38] chemicals which comprise vaccinations and worming medicines.

I was talking with one sustainability-aligned farmer, Eva, about her sheep and she explained to me that when she switched her farm over to organic, she realized that she needed to "rethink" how she raised her sheep as well. Eva was worming them every six weeks as she was instructed by a veteran sheep farmer. She told to me, "I read an article that reported how some wormers are going through the manure and killing the microorganisms in the soil, even when you compost it was still doing things to your compost so I had to figure this out. Now I only worms when I see a problem." She monitors her sheep for those types of problems by pulling down their eyelids to check the pink part, "if it's white that means they are anemic which means they probably have parasites so then I go ahead and worm them, but I won't keep that sheep for a replacement animal, I won't keep it for brood stock."

Eva described her goal to me, "I want to cull the flock into a sort of survival of the fittest, which contains sheep that don't need a lot of grain to sustain themselves and who don't need to be wormed all the time or down to worming maybe once a year." So if the problem gets worse this farmer will use a standard worming medicine purchased from an agricultural venue such as Southern States as a last resort. However, two other sustainability-aligned farmers opt for different measures. The first of the two farmers researched alternative worming medicines through different sources that she has and discovered a formula that was comprised of herbal

[38] Not all of the "sustainability" aligned farmers will refer to the vaccinations and worming medicines as poisons. While some do refer to them as "bad for the animals" or "bad for the environment", others will simply relate that they do not feel they are needed or that they can manage without them, although there is still a sense of uncomfortableness surrounding the practice of using the "chemicals" to treat potential risks.

remedies. I helped her administer this herbal remedy one morning to her animals and she was adamant about keeping the formula a secret. She was very concerned about the health of her animals, but did not want to compromise her foundational ideology of *not* incorporating synthetic chemicals or medicines into her management plan. When I asked her what she would do if this didn't work, she simply said, "it should work, it did before."

The second farmer voiced his feelings toward the chemical, synthetic treatments more freely and did not want those "poisons" on his farm. He explained to me that there are other ways and other herbs that will treat the problems just fine. I was at his farm the afternoon he and some friends of his were researching alternative remedies online. A couple of them were reading different websites and would tell the group what they found. A few different herbs were mentioned and so they gathered these herbs, mixed them together, and gave them to the infected animals. They had not given this type of treatment before and I was a little concerned about the intermixing of the different herbs they used, but they did not seem worried. This particular farmer aligns himself with sustainability, but also another branch of sustainable agriculture called biodynamic farming.

Biodynamic farming is considered to be a more radical form of organic agriculture. In 1924, an Austrian philosopher, Rudolf Steiner, initiated research that challenged the direction and practices of modern agriculture. Although he did not coin the term, biodynamic farming arose from his agricultural philosophies (Paull 2011). Biodynamic farming includes composting, using animal manures, crop rotations, caring for animal welfare, and viewing the farm as a whole system (Turinek, et al. 2009). The underlying philosophy behind biodynamics is that there is minimal waste on the farm and that the waste of one part of the farm becomes the energy for another part which makes the farm self-regenerative and ultimately sustainable. The farmers

of biodynamic farming manage the farm using the principles of a living organism. This may sound like similar goals and sentiments of the farmers in my study, but the practices that the biodynamic farmers use is what really defines them. When I asked how biodynamic farmers are different, the biodynamic farmer told me that one common practice is to place cow manure into a cow horn and bury it underground in the fall so that it will nurture the roots of the crops. He feels that his farming practices follow a spiritual methodology and are in tune with nature's rhythms.

6.8 STEREOTYPES AS ANOTHER HINDRANCE

In chapter 2, I discussed several of the stereotypes concerning Appalachia and provided more accurate representations produced by recent scholarship. Before I began my research I was familiar with some of the stereotypes due to the media's portrayal, but it wasn't until after I had been living in West Virginia and talking with farmers and residents that I realized the extent to which the misunderstandings and fallacies still existed. In particular, some farmers used them to explain certain behaviors and lifestyles of other farmers.

During conversations with a few of the sustainability-aligned farmers, they told me that some of their neighbors, were "typical of the region" and did not know or care to learn about the new ways of farming that were less harmful to the earth and people. I found that these sentiments translated into why certain farmers were considered to be "backward" or "uneducated" and were also reasons occasionally given by some of the sustainability-aligned farmers for differences in farming philosophies and methods. For example, while having a conversation with a sustainability-aligned farming couple I asked if they worked with Ted [a

conventionally-aligned farmer who was born and raised in Preston County] and the wife told me, "No, we don't really have much interaction at all, I mean we might wave at each other but that's about it. He's sort of typical of the region and we don't really have much in common, I'm not sure what we could do together." While discussing his conventionally-aligned neighbor, another sustainability-aligned farmer explained to me, "We try not to have any interaction with them at all. I saw them burning their garbage before and it's too bad that our properties are so close. I can't even imagine the way they farm. I don't think I want to know."

All of the conventionally-aligned farmers, with the exception of one, felt that these were some of the reasons sustainability-aligned farmers did not interact regularly with them. As one conventionally-aligned farmer explained to me, "They don't think I'm as smart, that I'm just some terrible person and that's why I farm the way I do." Another conventionally-aligned farmer told me:

> My grandfather was working this farm long before they [the sustainability-aligned farmers] even knew they wanted to farm. We have the same land and the same farm now. Doesn't that tell you something about success? But they don't think so, they think we're not smart enough to run it, cuz we're some Appalachian hillbillies or something. Well we're doing alright, and we have been for a while now.

Not only have individuals lamented their experiences to me as feeling like "dumb Appalachians," but also farmers, regardless of alignment, have told me that they often feel there is a negative stigma held against them which is based upon being a rural farmer. During an informal interview with a sustainability-aligned farmer, she explained to me that she feels others have judged her because of the choices she has made. "I think a lot of people see me as just a dumb farmer and that I did not make anything more of my life." Other farmers have echoed the same sentiment to me, although sometimes with a bit more sarcasm. For example, one

conventionally-aligned farmer commented, "I had to rebuild the tractor's engine last winter so I decided to replace the crankshaft bearings, inspect the valve seats for cracks, and re-sleeve the cylinders, but what do I know, I'm just a simple farmer."

However, not all of the sustainability-aligned farmers considered being "typical of the region" as a negative characteristic. Lily, a sustainability-aligned farmer, gathered confidence from a stereotype which labeled all Appalachians as self-sufficient. One afternoon while I was helping her wash the zucchinis we had just harvested from the field, she explained to me, "Not all of the things they say about Appalachians are bad, you know. I draw inspiration from being a self-sufficient Appalachian, it gives me the strength to complete difficult and demanding farm work as well as to operate my business successfully."

Another stereotype of Appalachia characterizes it as a poor region, and although the poverty rate is higher than the national average, I encountered a range of socioeconomic levels among the farmers, regardless of identified categories (APL 2000). While a few of the farmers complained about paying the bills, none of them expressed to me that their economic situation was within "poverty levels." Instead, many of the farmers enjoyed a comfortable lifestyle. However, one sustainability-aligned farm family utilized the USDA's Supplemental Nutrition Assistance Program. It seemed unusual to me for farmers who raise livestock and grow produce, to use food stamps. After I expressed some confusion over the situation, I was told:

> It actually works out better for us economically to get food stamps, in terms of time spent working. When we calculate how much time it takes for me to spend in the garden cultivating our food that way, it is actually more expensive than to get the assistance. Like, my husband and I sat down and figured out how much it would cost us to have me doing that when I need to be doing other things. I know it sounds weird for a farmer to be on food stamps when we grow food and grow it for other people, but this is what works for us now.

A conventionally-aligned farmer expressed something similar when talking about his family's farm, "We are able to produce a lot more on this farm because we build and adapt our own machinery. If we had to purchase all of this equipment, well, we couldn't afford it." Another sustainability-aligned farm family explained to me, "If we did not grow our own food and instead had to purchase it at a grocery store then we could not afford to eat as good as we do. Since we grow things organically [not USDA certified organic], we couldn't afford to purchase organic foods at the store." When assessing their economic situation, farmers not only took into consideration the quality of food they consumed and the kind of equipment they used, but also the tax breaks, bartered goods, and volunteer labor that they received. Variables such as these help to demonstrate that poverty is not a straightforward concept and using the term often conceals the strategies farmers utilize.

Since its creation in 1965, the Appalachia Regional Commission (ARC) has promoted development in order to improve socioeconomic conditions and alleviate poverty within the region. During the time of my fieldwork, the ARC took special interest in fostering and improving local food systems. I attended a meeting at a high school, where one of the farmers teaches, which was organized to target the ARC's local food development program. As I sat listening to the high school's staff present its situation to the members of the ARC, I heard them discuss how badly their school needed the organization's financial help. They explained to the members that an overwhelming percentage of their students used the meal program which provided children with free or subsidized lunches. The staff continued with examples of living in a "depressed area," and I realized that they were using descriptions of Appalachian poverty to help them secure capital. As funding from the ARC is highly competitive, the teachers at the school were employing a strategy which echoed the reasons why numerous state and

congressional leaders lobbied to be included within federally mandated Appalachian boundaries. I found that there were times when residents argued against centuries-old stereotypes claiming that was not who they were and there were other times when they harnessed them so that they could benefit.

Racial demographics have been misinterpreted within Appalachia and are a rather complex issue. The image of only white people living in Appalachia is an imperfect depiction, and minorities are often still considered "invisible races." The farmers in my study were all white with the exception of Paulo, a sustainability-aligned, Hispanic farmer. The lack of racial diversity within my sample was most likely due to the membership of the organizations that I accessed for participants as well as the fact that white informants referred white farmers for the study. Other individuals that I saw helping on farms, either friends or hired laborers, were also white except on Paulo's farm. Paulo had an extensive network of Hispanic friends who occasionally helped him on the farm, but who more regularly spent time with him in various recreational activities such as soccer. However, the invisibility of minority races was recognized by some of the participants in my study. For example, I was helping Paulo and his wife with their irrigation system one morning and we were talking about how they wanted to sell their house and move to a larger piece of land. When telling me about their search, they said:

> We just feel like our options are limited because we feel like we would encounter some unfriendliness if we moved to an area that was too rural. We feel safer in a more urban setting. We just need to be really careful because of our kids growing up around here. We haven't really had a lot of problems, but we've heard stories from friends about certain areas and that's how we've decided to stay closer to the city. Plus, there's just an awkward feeling the farther you get out there, you know, I mean not everywhere, but some places definitely.

The white, rural farmers did not give me any reason to believe they would take issue with minorities living in their communities, but it was not something that we extensively discussed.

However, Paulo and his family felt strongly enough about it that they would not live in certain areas. Land is often less expensive the farther from the urban and peri-urban centers that it lies, but that was not enough to motivate the family to consider moving there. Although Paulo and his family did not feel any tension in their current urban home, they explained that they thought it would exist in the country.

The farmers in my study do not fit any of the pejorative stereotypes surrounding Appalachia; they are not backward, uneducated, isolated, or helpless. Rather, they are highly intelligent, highly adaptive, and extremely resourceful individuals, and knowing that other scholars have come to this same conclusion certainly only helps to support my own ethnographic findings. Understanding the different stereotypes helped me considerably while conducting my field work because I could analyze them through the lens of an "Appalachian imagery" that had been reproduced for centuries. Therefore, I was able to inquire more about the specifics of the sentiments regarding the perceived differences among the farmers.

Talking more with the farmers and encouraging them to expand upon some of the stereotypes allowed me to further analyze additional possibilities for why there was not more collaboration among the differently aligned farmers. After in-depth conversations, I discovered that the sustainability-aligned farmers did not always attribute being "backward" and "uneducated" to *only* "being Appalachian" or "typical of the region". The sustainability-aligned farmers explained that individuals "typical of the region" were also conventionally-aligned farmers, and even those conventionally-aligned farmers who were *not* from the region were still "a bit backward" or "unwilling to learn". Therefore, the common factor was not Appalachia, but rather being a conventional farmer, which demonstrated that sustainability-aligned farmers placed more emphasis on the perceived distinctions between "conventional" and "sustainable."

Even though the stereotypes were not the main obstacle hindering more collaboration among farmers, they definitely still existed within this small region in Appalachia and they certainly contributed to misunderstandings and social transgressions.

6.9 CONCLUSIONS

The discord between sustainability-aligned farmers and conventionally-aligned farmers seems much more prominent and less mysterious than before when only examining their on-the-ground practices. The strong emphasis on a sustainability ideology creates a strong division between the people whom farmers feel they can relate to, learn from, and value. Even though all of the farmers in my study had overlap and consistency in many of the same practices, they still do not call upon farmers of different alignments for help or advice. Not only do they feel they will not learn anything valuable from the interaction, but in many respects they also feel as if they are betraying their own ideals by cooperating with "the enemy", so to speak.

I had numerous conversations with conventionally-aligned farmers who would tell me that they use many of the same practices as the sustainability-aligned farmers, but that those farmers do not recognize it. Some even offered specific examples of how in certain cases their farm operated more sustainably than the "sustainable" farms. For example, only about half of the sustainability-aligned farmers in my study kept livestock in addition to growing vegetables and were able to put the fertilizer from their animals back into their farm. A main tenet of sustainable farming is to decrease one's off-farm inputs. The other half of sustainability-aligned had to purchase their fertilizers from commercial venues. Since chicken manure is extremely high in nitrogen and has a good amount of phosphorous and potassium as well, the farmers liked

to use chicken manure as a fertilizer. Those who did not purchase from a commercial venue, purchased from other farms. The most popular farms are the ones in the eastern panhandle of West Virginia and parts of western Maryland. The farmers will often drive to these farms to pick up their soil amendments. These chicken farms are the "factory farms" of the region and are mostly contracted by Perdue Farms, the third largest chicken producer in the United States.

Many of the conventionally-aligned farmers know this and could not understand why the sustainably-aligned farmers would be part of "a system" which they often criticize. The conventionally-aligned farmers often referred to the behavior as an act of hypocrisy. A conventionally-aligned farmer explained that:

> Although we [referring to himself and other conventionally-aligned farmers] have to purchase some additional amendments, we use all of what we can capture from our livestock to put back into our farm. It just feels like we are being unfairly judged and are not given the respect we deserve, all the while the "sustainable" farmers advocate their practices are better.

When talking with conventionally-aligned farmers there was often either the explicit or implicit feeling of offense in their stories when discussing "sustainable/organic" farmers. The offense did not derive from a discomfort with the way the other group farmed, but rather from the way they felt the other group categorized and judged them. Conversely, when talking with the sustainability-aligned farmers about conventionally-aligned farmers there was more often a sense of direct disapproval with the way they farm. The way the farmers feel about each other serves as an obstacle to more frequent collaboration, and although farmers are not responsible for the way this conflict began, they are responsible for its continuance. They are also each responsible for the interference it is causing in truly exploring a wealth of information and possibilities in the form of increased collaboration. Is this the way it will be? Has alternative farming become its own standard and relinquished its quest for improving the agricultural system by refusing

possible beneficial allies? In the final chapter I offer an example of two differently aligned farm families who collaborate together in meaningful work as a glimmer of hope.

7.0 CONCLUSION: IS THERE HOPE FOR RECONCILIATION

This dissertation has shown how small, rural farmers in north-central West Virginia utilize many of the same sustainable practices despite different identified categorizations which ranged along different degrees of "sustainable" and "conventional". When I initially began my fieldwork, I carried with me notions that farmers could be labeled as either operating a sustainable farm or a conventional farm. These notions had been built upon years of reading through agricultural and sustainability literature, which covered early farming practices in the United States and the introduction of technological systems of farming such as synthetic, chemical fertilizers and pesticides. Then as rediscovered information became more widely available the agricultural material included those groups of people who opposed the "new" system of farming and argued for a return to more natural ways of extracting food from the land. These groups of people felt the system which included chemical fertilizers and pesticides was artificially producing higher yields and that this in turn does not allow the earth to replenish itself naturally. The chemicals were also believed to cause environmental pollution to air and waterways as well as damage to human bodies.

Due to these beliefs, new methods of farming were fashioned which were designed to reverse the effects of the detrimental ones currently in use. These new methods were then placed into contrast with the previous methods and labels such as "conventional," "traditional," "industrial," "organic," "alternative," and "sustainable" were attached in order to identify which

methods were employed on different farms. The labels then began to represent two opposing agricultural operations.

Table 8: Opposing Systems of Agriculture

CONVENTIONAL	**ORGANIC**
TRADITIONAL	**ALTERNATIVE**
INDUSTRIAL	**SUSTAINABLE**

The creation of these opposing systems of agricultural operations only gained momentum as each "side" lobbied the public for more members (farmers) and the government for more money. In order to achieve this, each side has to make its case for why it is the best choice of farming practices. The sides become more and more pitted against one another as they compete for the same resources (people and funding). However, these are not the only reasons the divide between the two systems deepened and continues to deepen. Recruiting more farmers and applying for more money does have a strong effect on how the public and the government interpret, understand, and reproduce the divisions, but many of the farmers of the different camps wholeheartedly believe in what they were doing as well. They believe there is an identifiable, clear-cut difference in farming operations. When I began my fieldwork I naively believed this as well.

My original research questions were designed to deconstruct and dissect what "sustainability" meant to farmers. I had been reading about it from the points of view of other scholars, policy makers, and development workers. Being an anthropologist, I realized the value in understanding what the *farmers* were doing with sustainability on-the-ground. What did it mean to them? Did they find the term useful? How did they operationalize their ideas of

sustainability into practices on their farm? When I set out to find farmers who would be willing to participate in my study, I had decided that I needed to have the "two different sides" of farming represented in my study in order to understand sustainability in and of itself, but also as contrasted against something else, i.e. conventional farming.

When I had a sufficient sampling list to work from, I began calling the farmers and setting up meetings with them. In the meetings, one of the questions I asked them was whether they were sustainable farmers or conventional farmers. It did not take long to realize that these labels were not adequate in capturing what these farmers were doing or trying to do. Many of them explained to me that they did not refer to themselves as "sustainable" or that they weren't really "conventional". Instead, those who did not identify themselves as "sustainable" or "conventional" the descriptions "working toward sustainability" and "leaning toward conventional" emerged from their narratives. After many conversations and a great deal of participant observation with the different groupings of farmers, I discovered that many of them operated on a *spectrum* of practices. The most surprising finding was that many of the farmers that identified themselves along the "conventional" spectrum actually utilized many of the same practices as the "sustainable" spectrum farmers.

This finding is quite extraordinary when realized within the scope of the agricultural literature. The agricultural literature, the media, and government paint a sharp contrast between the two types of operations, placing them in direct opposition to one another in regards to their practices and the effects of their practices, i.e. conventional farming either as polluters or feeding the world and sustainable farmers either as naïve, idealist crusaders or saving the earth and its people. In fact, this means that unless farmers communicate with other farmers outside of their alignments then most farmers have no idea that the "other side" is farming in much the same way

they are. It also means that the public, unless they have engaged in a similar type of project as mine, likewise does not know these farmers are doing something drastically different than what the literature, media, and government say they are doing. I have argued that the main problem that derives from not knowing what is actually happening on-the-ground is the production of incorrect assumptions and the designation of concrete labels. The labels, rather than capturing reality become a representation of stereotypes that mask the similarities between these small farmers. Additionally, the labels also conceal the intricacies of daily decision making on the farms.

In chapter 4, I showed how these labels and the assumptions linked to them have played a strong role in hindering collaboration among farmers from different alignments. It is a rare occurrence when the farmers did cross over and communicate about farming practices, specifically about advice or help in regards to the farm. The times when there was any type of cooperation were organized around disasters such as the dreadful snow storm in the winter of 2013. The farmers often did not know much more about *different* farmers other than their alignments, but this was often all they felt that they needed to know to determine whether or not they could learn from them. The assumptions that farmers carry with them about the "other side" keep them from learning that in fact they do have much in common and could be sharing a great deal of information.

In addition to the practices that overlap within the different alignments of farmers, I revealed that there is also shared knowledge construction among the farmers. This shared knowledge construction relates specifically to how the small farmers perceive, understand, and interpret their farms. The farmers, regardless of their alignments, all view their farms as a system of interconnected and interdependent parts. They view the land, animals, plants, and

people as all working together and each of these elements can influence the course of another (intentionally or not). All of the small farmers in some way utilize one or more of these elements as "management tools" to encourage their farm to operate in a certain way. For example, the livestock farmers use the natural tendencies of the cows to aid in fertilizing their soils. The soils then nourish the grasses which in turn nourish the cows. They discuss this relationship as a repeating circle which is not only good for the health of their farm, but also increases their on-farm inputs. Not only do many of the farmers strive to operate their farm with more on-farm inputs than off-farm inputs as part of their farming philosophy, but they also save money this way. Both of these reasons are extremely important to the farmers.

The shared view of the farm as an interconnected system shapes many of the daily decisions made on the farm. It affects macro-level decisions such as whether they want a vegetable farm with livestock or a livestock farm with one or two other crops as well as whether the dairy farmers will grow their own grains. It also affects micro-level decisions such as using black plastic and drip irrigation including which kind of soil amendments to incorporate. It is this view of the farm which produces many of the same sustainable practices among the farmers. This means that sustainability ideology does not produce this "systems thinking" because the conventionally-aligned farmers in my study, who do *not* subscribe to sustainability ideology as I have defined it, also perceive the farm as an interdependent system.

"Systems thinking" therefore, does not derive solely from a sustainable ideology and can be held by non-sustainability subscribers. It has the potential then, just as the similar practices, to move across labels and unite farmers in their search for solutions concerning farming problems and challenges. However, I have showed that although the small farmers utilize many of the same practices and share a working perception of the farm, it is not enough to unite them.

The effects of the creation of opposing sides of agricultural operations and the dedication to a sustainability ideology prevent the small farmers from coming together to address problems and find solutions.

Sustainability ideology is very powerful to many subscribers and as I have showed, often interferes with their recognition of indirect consequences that derive from the changes they lobby and petition the government and industry to make. They are so focused on their goal that they truly do not think about the people that will be forced to find a different livelihood or leave their homes. Some also feel that it is a necessary sacrifice and that the people who are forced to change, should change because it is they who are responsible for the threats against our environment. However, it is often the rural, local communities of people who are the necessary sacrifice. Are the Maasai a necessary sacrifice? Are the indigenous people living within Project Tiger a necessary sacrifice? Are the coal miners and their families a necessary sacrifice? When operationalized like this, sustainability ideology becomes dogma. It becomes a set of principles that are to be followed without faltering, even if people are the casualty and the principles are accepted as incontrovertible truth (Sheldrake 2015, Tucker 1982, Will 2015).

I caution this way of thinking, when any way of thinking becomes so infallible that we forget to ask others their thoughts, views, and ideas. This is what truly alarms me, the potential for agriculture to be turned into a battle ground of world-governing ideological proportions. In many respects, it has already been there and continues to go there. The Green Revolution spread to other continents such as Africa and recently, the World Bank, the International Monetary Fund, and the United Nations have all implemented projects disseminating sustainability ideology all over the world (IMF 2015, TWB 2015a, UN 2015).

Only through the disintegration of the opposing sides of agriculture will we find cooperation. With cooperation we can add more experience, knowledge, and information to our repertoire. We can be that much more prepared for facing the challenges that plague our world's agri-food system; challenges such as global hunger, regional malnutrition, hazardous working conditions, and inadequate wages. When facing challenges like these we need an arsenal, we need a group effort, and we need a team. Can it be done? Yes. It's already starting.

7.1 MENDING FENCES: THE BEGINNING OF COLLABORATION

Patchwork Farms is nestled in the foothills of the Appalachian Mountains. When the young couple, Ian and Rachel, who operate the farm, moved to West Virginia and bought the land, they had high aspirations for running a sustainable farm. They had worked in other occupations after college, but decided that rural life captured their hearts and therefore wanted to work in a way that afforded them that kind of lifestyle. They had never owned a farm before, but had apprenticed on one and wanted to give it a try. The land they purchased had not been a working farm for some time. They knew they had a lot to do, but had no idea what they were going to face. The farmers described their earliest experience to me while laughing about their "greenhorn" roots:

> Ian: Our first year we had just plowed the field and we had this really low pH so we were like super worried how nothing's gonna grow…
> Rachel: and it's like blustery April, like miserable cold out…
> Ian: yeah, laughs, you know let's go get this hydrated lime, you know, and hopefully it'll bring our pH up – and so we were like it comes in these fifty pound bags and we have no equipment to spread it or anything and so we were out there with like little yogurt containers dipping it in. I mean this is just on a half-acre garden too so it's not as crazy as it sounds but… so we were dipping the yogurt

> container and kinda just flinging it out, you know, kind of spreading it that way and this year we -
> Rachel: so that was their [NRCS] first exposure to us and they like show up and we are obviously not from here and they find out we've come from out west and they're like okay these people don't know what they're doing, laughs, on this huge forty acre farm. We got half an acre that we're out there with yogurt containers spreading hydrated lime…

This story is not unusual coming from individuals who are new to farming. The specifics might change from story to story, but the underlying theme of uncertainty and feeling a little helpless rings true for a lot of farmers when they start their own farm. It is also not unusual that new farmers are the farmers who are establishing alternative farms. Conventional farming seems to have a better system of succession in place and is often operated under second and third year generations of farmers. This means that those getting into alternative and sustainable farming have often not owned and operated a farm previously (Gray 2014).

The "educational" system in place for alternative farming is a system of apprenticeships and internships such as the Willing Workers on Organic Farms (WWOOF) program. These individuals, referred to as WOOFERS, are often just out of high school, taking a break from college, or have recently graduated college. They are relatively young when compared to the average age of the American farmer which is fifty-seven years old (USDA 2007a). The apprenticeship teaches the students a lot about farming and ultimately helps to guide them toward a decision as to whether they want to pursue farming as a career. However, it does not place them in a position of owning and operating the farm which is an entirely different position. The conventional farmers who often produce second and third generation farmers often give their children and grandchildren responsibilities which more closely simulate the obligations and accountabilities of ownership such as keeping the books and making large purchasing decisions.

It is not surprising then, that those who have not been working in a circumstance such as that would be spreading lime with yogurt containers.

One of the major differences I noticed between "conventional" second and third year generation farmers and new "sustainability" farmers was the comfort level in purchasing big equipment and securing large financial loans. The conventionally-aligned farmers explain that they basically grew up with these kinds of practices and purchasing a US$80 thousand tractor is not as daunting as it may sound to others. They also recognize that much of their money is tied up and invested in their farm. One young conventionally-aligned farmer recounted a conversation he had with a customer:

> I was organizing some coolers when a woman who was standing next to my old beat-up pick-up truck remarked loudly enough for me to here, "Can't you afford a nicer vehicle, I drive a Mercedes". I turned and smiled at her and told her that I had a tractor at home that was probably worth double her Mercedes, but it is not fuel efficient to drive it much anywhere except on the farm. I continued then to tell her about all the infrastructure on the farm that we had been building over the years and that all the barns, sheds, and chicken coops were worth well over a quarter of a million dollars. She seemed like she started to get the picture and nodded and walked away. It really bothers me when people carry around this notion of a "poor farmer"[39].

Newer-to-farm-ownership sustainability-aligned farmers often have a really difficult time comprehending the up-front costs of farming. They frequently mentioned to me their uneasiness about purchasing a tractor and having to deal with another loan payment. Even an Extension agent discussed this divide with me. He explained that the "new" farmers hesitate a lot about

[39] This particular farmer holds a unique position in my research as he belongs to a "sustainability" aligned farm and yet his parents have been teaching him more responsibilities of owning a farm since he turned 18 years old. This is usually not the case with the "sustainability" aligned farmers in my study. The children are all either younger than 12 years old or the parents have simply chosen to not include them in this particular aspect of farming.

making larger purchases because they are not comfortable living with several different large loans. In addition, they are not used to living half of the year on "credit" until their harvests come in and they actually have real cash to then pay off the loans from the planting portion of the year. Farmers that are raised on a farm understand this lifestyle and therefore are more comfortable with living this way when the ownership falls more upon them.

This is another area in which newer farmers, whom are usually "alternative/sustainable" farmers, could really use a mentorship with other experienced farmers. They could access other "sustainable" farmers of course, but this is also a great opportunity to be able to talk to "conventional" farmers about how to cope with a "debt" lifestyle. In some cases the closest farmer to a "sustainable" farm is a "conventional" farm and therefore communication between these two is much easier physically as questions will frequently entail showing the particular problem or situation to another farmer. In addition, especially in this region, the conventionally-aligned farmers tend to be purchasing larger and more equipment and more than likely have a higher debt to credit ratio than sustainability-aligned farmers. Sometimes even talking to other farmers about their accounting can help "newer" farmers realize the incredible investments and amounts of money that go into farming. When the "newer" farmers are deliberating over a US$10 thousand dollar high tunnel; hearing about their "conventional" farming neighbor's recent US$80 thousand tractor purchase helps put things into perspective a bit more. Having someone else to talk about these types of farming challenges help alleviate a great deal of stress for new and older farmers a like.

One of the bright spots of hope is that on one farm the collaboration between "sustainable" and "conventional" is already occurring. Patchwork Farms is a quintessentially by-the-books sustainable farm and Rachel and Ian farm several acres of vegetables and have

recently begun experimenting with grass-fed beef. Many of their vegetables are heirloom varieties and they are strong opponents of genetically modified organisms (GMOs). They compost, mulch, rarely spray, and when they do spray they use organic sprays. They sell at farmers' markets and through Community Supported Agriculture (CSA) membership. They discuss and deconstruct sustainability often and critically examine the effects of their farm toward environmental sustainability and social sustainability as well as the effects toward their own financial sustainability. Both of them apprenticed on another sustainability-aligned farm before purchasing this one, however in the beginning, as the above example demonstrates, they felt very unprepared and anxious about operating their own farm.

Rachel and Ian explained to me that they did (and continue to) call the farmers of the farm they apprenticed on to ask for advice and suggestions. However, those farmers were not always available and they live a little too far away to be able to help as often as needed. Rachel and Ian do have a neighbor that is a conventionally-aligned farmer with whom they communicate frequently about issues on their farm. When they began telling me about this relationship, it stood out as unique within my study and I realized that collaboration can be done. The husband and wife farming team at Patchwork explained to me that, "A good friend of ours who is a neighbor and also well, he's kind of like our farming mentor helps us a lot. When we came to this area he'd already been farming here his whole life and he really looked after us and gave us really good advice and a lot of help". The Patchwork farmers also really respect this farmer. One morning when they were telling me about how sometimes they feel like they are not working hard enough they mentioned their mentor again as sort of a "measuring stick" to how they feel like they should be farming. Rachel told me:

> I sort of had this feeling I don't know if [my husband] did but I felt like I was just a pansy suburban kid, like I'm complaining too much I just have to work harder

> and will do better and I would see all these people around here who worked non-stop, you know, like work themselves into the ground, die on their tractors, you know like that. And he's [my husband] talked about our mentor in farming who like I swear to God is the hardest working man at like seventy years old, laughs. You know, works harder than us laughs. And does not complain, never complains, you know, he'll just say I feel a little tired today.

The Patchwork farmers clearly respect this man and did not talk about his "conventional" practices in any sort of derogatory way. In fact, they could see the farmer through the practices, so to speak, and could admire him for what he does. In fact, they explained to me that not only have they learned a lot of on-farm practical advice from their mentor, but they also learned about the "divide" between "sustainability" and "conventional" and have become rather suspect of it, if not completely rejecting it. For example Ian told me:

> I mean, you know we've really learned a lot. We were very green coming here and especially farming in this climate. We've got a lot of great advice – I mean it's really made me realize that there's not this huge divide between conventional and sustainable farmers I mean the skill set is 80 percent the same and the other 20 percent differs in kind of broad general approaches but a lot of what you're doing day-to-day will be very similar.

They explained that one way they came to realize this was the way in which their mentor farms. I was asking them even though they felt like sustainable practices existed more along a continuum that if there were any practices that they felt were just absolutely no-way sustainable. Rachel's explanation included a reflective synthesis of their interactions with their mentor (as well as other "conventional" neighboring farms and what they had been seeing on their mentor's farm:

> It's hard for me to judge. I mean I definitely have a knee-jerk reaction to some farmers but I have been with enough farmers who do not necessarily use all conventional methods. I mean I never would've felt like a farmer who planted GMO stuff could qualify as a sustainable farmer in any realm but now living here and knowing farmers I definitely have adjusted that view, that you can be

sustainable in one area and not in another area like our mentor that we talk about because he raises bees. He's got tons. He raises all kinds of crops like grapes and wild cranberries and he raises pretty much every kind of animal that you can raise and even used to have sheep. He's got goats, no he doesn't have goats. He's got geese. He's got ducks all kinds of different stuff. I mean, but he grows GMO corn and you know he's always curious about what we're doing and he'll talk to us very honestly and, you know, if he's got advice it's always advice that does not include pesticides it's always, "Okay you could try this…" He knows we have a certain way of looking at things and we will ask him stuff like, I think… [she turns to her husband] have you asked him if he would be willing to grow non-GMO stuff?
Ian: Um..
Rachel: Oh you asked him about baling hay, right?
Ian: I've asked him about a lot of things…
Rachel: Yeah…
Ian: I was asking him recently about organic field corn you know if he would be willing to…
Rachel: Yeah, that's right. See, if we wanted to raise pigs or chickens and have a local source of non-GMO corn from him, which would be really important to me if we were to be raising those things to not give them GMO corn. And so, like I feel like there's a lot of give-and-take in that conversation in particular because we are really close to him but I really feel like there's a lot of other farms that I don't feel that close relationship with and if I went there and actually got to know them and saw what they were doing then there would be plenty of things that they're doing sustainably right alongside a totally unsustainable thing.

The husband and wife farming team at Patchwork farms have a different perspective on the division between "sustainable" farms and "conventional" farms and they explain that much of this perspective has been guided by their interactions with a "conventional" farmer. Since they do not see as much of a "division" as the labels imply, they have been able to acquire a wealth of information from a neighboring farmer. Not only does increased collaboration give farmers the chance to access new forms of knowledge, but it can also give farmers additional avenues for diversifying their farms such as Patchwork Farms teaming up with their mentor to grow different crops that will allow them to add other operations to their farm. Ian and Rachel

hold a unique viewpoint on the ways in which different farming alignments actually operate on-the-ground and they have been able to benefit from it. Their ability to not hold severe judgements about who they can learn from and who they cannot learn from has provided them with a much wider pool of resources, ranging from advice to actual cooperative farming measures. Their relationship with their mentor demonstrates that not only can it be done, but also the myriad benefits of engaging in such relationships.

7.2 SCHOLARLY WORK ON COLLABORATION

In addition to farmers who are taking the initiative to cross-over and disrupt the inefficient labels of "sustainable" and "conventional", scholars are also participating in the challenge. Brandi Janssen, an anthropologist working at The University of Iowa has begun pioneering research in the field of agricultural health and safety. In her own work on improving sustainability among farms in Iowa she explores an additional element of sustainability that has received little academic attention and introduces a fourth dimension of sustainability. In addition to the commonly recognized and referred to tripartite nature of sustainability as comprised of economic sustainability, environmental sustainability, and social sustainability, Janssen also calls attention to the importance of safety as either advancing or hindering sustainability efforts. She specifically discusses safety in relation to farm laborers' conditions on the farm rather than "food safety" which has already received a great deal of attention from scholars, the government, and the media alike.

Janssen's argument is that we need to keep our farmers safe while engaged in daily farm operations in order to sustain farming as a lifestyle and a career (Janssen 2015). According to

the International Labour Organization, agriculture is one of the most hazardous occupations in the world and of the 335,000 workplace fatalities around the globe, more than half of them occur in agriculture (ILO 2015). Janssen argues that conventional agricultural practices and sustainable agricultural practices can inform one another along the lines of safety. She feels that alternative agricultural operations are specifically at risk for on-farm injuries and accidents because the farmers assume that nothing seriously bad can happen because their farm is so small and they are not working with large-scale equipment.

While visiting a small "sustainable" farm in Iowa, Janssen witnessed the owner getting his tractor stuck on a bank. She took one look at the situation and realized right away how dangerous it was. The tractor was slanting badly to one side, in a position which would cause it to topple and roll over onto the farmer. She explains that these small farmers are using smaller, older equipment and often the equipment does not have as many safety features as the large-scale equipment. For instance, this particular tractor did not have any protection for the farmer if (and when) the tractor does upset on its side; the farmer would be crushed by the tractor or possibly cut by the under-mounted implements such as mower decks.

From this example, Janssen maintains that small farms and often specifically, the alternative farms could learn a lot from the larger, conventional farms about the importance of safe equipment. The larger-scale tractors often have a "roll bar" or a complete cab that encloses the farmer. This cab not only helps protect the farmer from the sun's powerful rays, but also serves as armor in case the tractor upsets on top of the farmer. Janssen feels that because of the strict labeling that has occurred with "sustainable" and "conventional" farms, farmers are less likely to discuss farming issues with other farmers who are not within the same label. This is unfortunate because the conversations and advice that could come from such collaborations are

not only limited to farming practices and information, but can extend to safety issues as well, potentially preventing numerous injuries (Janssen 2015).

During the course of my fieldwork, a young sustainability-aligned farmer suffered from a traumatic and horrific injury. At the time, he was operating the farm completely by himself as this was his first time owning a farm as well as his first year within that ownership. He was mowing a field at one of his farm sites[40] and the mower stopped. Instead of turning off the tractor, he quickly jumped down onto the ground so that he wouldn't lose a lot of time and knelt down beneath the mower deck. As he was working on the tractor the blades swung loose and slashed into his right hand several times.

After the event he told me that the force created by the momentum of the spinning blades acted almost like suction and made it extremely difficult for him to pull his hand out of the blades. When he managed to dislodge his hand, he had to struggle to keep himself from passing out because several of his fingers were barely attached and there was a great deal of blood. Since he was right-handed (for the most part), he struggled to get his phone out of his pocket with his left hand, while he called 911 as there was not anyone else around[41]. When I asked him what he did until the ambulance arrived he said he doesn't remember it well, "I remember thinking that I just needed to keep sitting up and keep my eyes open. I called my Mom and just

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[40] This particular farmer did not purchase land out right and instead leased different parcels of land from other farmers. This practice is not uncommon among new farmers and in fact many seasoned farmers who own land lease additional acreage.

[41] For rural farmers the problem of no one close by becomes incredibly important when an injury has occurred. Contacting help and the time passed waiting for help is especially integral in life and death situations in rural areas.

tried to keep from losing consciousness. I remember thinking that I might die from the pain and blood loss." The ambulance finally did arrive and took him to the hospital where he underwent emergency surgery. The doctors told him that if they re-attached his fingers he would not have much use in them. However, the farmer wanted his fingers because he felt that medicine is only improving and sooner or later there will be developments that will give him back the use of those fingers. It took several surgeries until his hand was put back pretty much the way it was before, although the doctors were right and he did not have much use of several of the fingers.

This story, however tragic is not uncommon. It could have been a lot worse because many of the farmers in my study lived rurally and the amount of time for an ambulance to come plus the time for the ambulance to then drive to a hospital severely complicates the injuries. This particular farmer decided that the injury was not going to end his farming days, as he told me later, "I am a farmer". He also explained to me that, "I knew better than what I actually did, leaving the tractor on like that, but I was trying to hurry and that's what caused the accident."

However, when considering the work of Janssen that might not be the only thing that caused the accident. The farmer is also young and new to owning and operating a farm by himself. He had apprenticed on farms before and does have people he can call for advice, but he does not have a mentor; an experienced, seasoned farmer that can remind him to slow down, to be careful, and to always think things through. This is not to say that experienced farmers do not have accidents as well, but the information, advice, and maturity one can receive from a mentorship often has the ability to help farmers reassess and reevaluate situations.

The mentor can also be there to provide support for the new farmer when something like this happens. This farmer had customers who had already paid for their vegetables at the beginning of the season and he had spent most of that money already for supplies for his

operations. His only choice was to continue to farm and provide the customers with the vegetables that they already bought, but had not received. Since he did not have a strong network of farmers in the area established to help him with his farm after the injury, he had to call in favors to friends across the United States. These friends, because of other commitments could only stay for a couple of weeks at a time and then he had to find replacements.

The situation at Patchwork Farms is much different. They explained to me that at different times when one of them has been sick or they had fallen behind for some reason; their mentor often volunteers to help or they feel they can just ask him for it. They told me how he has plowed for them many times which was a huge help. There are other neighbors too that have helped them on several occasions. Patchwork Farms has enmeshed itself within its small agricultural community. This region of Appalachia is very rural and people frequently rely heavily on their neighbors. Rather than farmers ostracizing themselves from this community because of different perceived ideological differences, they could embrace the sense of community and become a part of it, as Patchwork Farms has done. Ian and Rachel told me one day:

> Ian: I love talking to the neighbors about farming, you know it's…
> Rachel: it's true, people across the board whether they are very conventional you know or home gardeners you know or whatever it's always fun to talk about farming.

Patchwork Farms demonstrates a different perspective on what sustainability entails. Rachel's "confession" of initially believing that a farm that grows GMO crops could never be a sustainable farm has been tempered with an understanding that sustainability operates within a spectrum and she can learn a lot more, if she opens her mind to seeing the ways in which a farm can operate sustainably.

In addition, strengthening communities is often a touted goal of sustainability rhetoric; however this is not always realized. Instead, people have let the ideas of "sustainability" separate them from engaging with the entire community. They have built their own sub-communities, comprised of people they deem are more like them. In these cases, sustainability is only bringing a small number of people together and bifurcating a much larger group of people into an "us/them" polarization. Ian and Rachel still recognize that differences exist, but the point is that they do not judge based on the differences and they try not to let the differences come in between their relationships with other farmers in their community. This is a main component of tearing down the fences that have been built up by ill-conceived, misrepresentations of labels. Respecting the differences that comprise human society rather than vilifying an entire industry (such as conventional agriculture or even coal) will ultimately minimize the indirect consequences felt by small, local communities. Just as the collaboration between Western science and indigenous forms of knowledge will create the space for a multitude of voices to be represented, the collaboration between "conventional" and "sustainable" farmers will provide a space for information, knowledge, and resources to be shared as well.

APPENDIX A

INTERVIEW GUIDE FOR SEMI-STRUCTURED INTERVIEWS WITH 32 SMALL FARMER OPERATORS

I. Personal and Farm Information
II. Sustainability
III. Ecology and Animals
IV. Government Programs and Regulations
V. Linkages to Community

I. <u>Personal and Farm Information</u>

A. Where were you born?

B. Can you tell me about your schooling? High School/College/Graduate School? Interests/Majors?

C. Where did you learn about farming? How do you think people learn to farm today?

D. Did you live on a farm before this one? Where? Acreage? Crop, vegetable, livestock?

E. Can you tell me about your farm now? Acreage? How long have you farmed it? What kind – crop, vegetable, animal?

F. Who helps on your farm? Family/Hired/Volunteer? What percentage of the labor/work does each of those categories provide? Do you hire custom labor? Do you provide any custom labor?

G. Why did you start farming? How did you accomplish this?

II. Sustainability

A. Can you tell me what sustainability means to you?

B. How do you feel you/your farm contribute toward ecological sustainability? Social sustainability? Are you financially sustainable? How do you cope with stresses related to farm life?

C. How do you feel your ideas of sustainability differ from others?

D. Can you tell me what has shaped your ideas of sustainability?

E. What were you goals when you started your own farm? Have they changed? Do you have specific goals in regards to sustainability?

F. Can you tell me about the practices you have employed to help you reach your goals? Sustainability goals?

G. Are you farming the way you imagined you would? What have you found to be persistent challenges to accomplish your goals? And goals toward sustainability? How do you overcome failures?

H. Who do you turn to when you need help or advice for your farm?

I. How do you measure or gauge your progress toward your goals of sustainability?

J. Do you/wife/husband have off-farm work? Have you worked off farm for as long as you have farmed? Do you feel you could operate your farm financially without your second job? Is that why you have a second job? Benefits of second job? What has the second job enabled you to do?

K. Do your children help with the farm? What kinds of activities do they do? Will it be a good way for your children to make a living? Have you talked with them about what will happen to your farm?

L. Do you see many young people going into farming around here? Why or why not? If a young person came to you today and said they wanted to go into farming, what advice would you give them?

M. Do you think being a farmer made any difference in how other people treated you? Or thought of you?

N. Do you think the public's view of farming has changed? How? Why?

O. Thinking back over your life, what do you think have been the disadvantages and advantages of being in farming?

P. If you had it to do over again would you still go into farming? Why or why not?

Q. Is farming a good way to make a living? Has this been changing? Why or how?

R. Do you feel you have attained the lifestyle that you desire?

III. Ecology and Animals

A. Have you improved your farm land since you began farming it? How? Soil health/tilth/fertility? Facilities – capital improvements? Fences?

B. Do you feel your land/soil is healthy? What kind of indicators do you use? Example: soil tested by whom for what?

C. What practices do you employ on a regular basis to take care of your farm land?

D. What kind of crops do you raise? How do you choose those?

E. Where do you sell your crops/vegetables? How did you decide this? What determines the price you can get?

F. How do you deal with weeds, insects, and fungi?

G. Can you tell me how you feel about your farm land? What do you need in order to produce good crops/vegetables?

H. What types of livestock do you raise? How many of each? How do you choose these?

I. Are your livestock healthy? What kind of indicators do you use?

J. Do you vaccinate against disease? Do you treat with antibiotics? Would you explain to me why or why not?

K. Where do you sell your livestock? How did you decide where to sell it? How do you sell it – calves/fattened/chunks? What determines the price you can get?

L. What is the most important factor when purchasing replacements or more livestock? Animal quality/price?

M. Can you tell me how you feel about your animals? What do you need in order to produce good livestock?

N. Do you feel you are doing anything special with your crops, vegetables, livestock that set you apart from other farmers?

IV. Government Programs and Regulations

A. Have you participated in any government programs or organizations in regards to your farm? Which ones? Tax breaks/subsidies/NRCS cost sharing

B. What are the reasons you participate in some of the government programs or organizations? What are reasons you do *not* participate?

C. Do you know of ways government programs and policies have affected the way you farm? Example: meat inspection.

D. What should change about government programs that would help you?

E. Is there anything the government should stop doing that would help farmers?

F. Have you received any grants? Can you tell me about them?

G. May I ask how much the grant was worth? Was this your first time applying? Would you apply again?

H. How did you hear about the grant?

I. Was the grant helpful? Were there any stipulations with the grant/what were they? Do you agree with the granting agency's goals?

V. Linkages to Community

A. What communities do you feel you belong to? Why? (agricultural, church, neighborhood, etc…)

B. Do you turn to your community for help? Do you feel responsible to help your community? In what ways?

C. Tell me about the organizations that you belong to. Which have you been active in?

D. Do you go to church regularly? Have your religious beliefs affected the way you farm?

E. What are your neighbors like? What kinds of things do you do with your neighbors? Do you talk to them about farming? Are they helpful?

APPENDIX B

LIST OF ACRONYMS

ARC	Appalachian Regional Commission
CAFO	Confined Animal Feeding Operations
CNG	Certified Naturally Grown
CSA	Community Supported Agriculture
EPA	Environmental Protection Agency
GMO	Genetically Modified Organisms
ISA	Ideological State Apparatus
LGU	Land Grand University

NAFTA	North American Free Trade Act
NMP	Nutrient Management Plan
NOP	National Organic Program
PASA	Pennsylvania Association for Sustainable Agriculture
PIA/PNAN	Inter-Agency Project for the Promotion of National Food and Nutrition Policies
PLEC	People, Land Management, and Environmental Change
SA	State Apparatus
SARE	Sustainable Agriculture Research and Education
SNAP	Supplemental Nutritional Assistance Programs
UMWA	United Mine Workers of America
USAID	United States Agency for International Development
USDA	United States Department of Agriculture
WCED	World Commission on Environment and Development
WOOF	Willing Workers On Organic Farms
WTWHA	Wet Tropics of Queensland World Heritage Area
WV	West Virginia

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